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M O R A L E

A GUEST EDITORIAL BY WILLIAM ORR LUDLOW

Some say we architects are losing our morale and are going to lose it more as architectural work diminishes. Perhaps so.

What is "morale"? I think we commonly mean by morale a spirit of loyalty, devotion to a cause, with a willingness to serve unselfishly. Because we are facing hard times are we going to lose our spirit, our loyalty and devotion to our profession? I don't believe it. I don't think architects are that kind. I think we are going to do something about it. What?

Well, we know that morale is essentially a group matter, best stimulated by common beliefs, common aspirations, common purposes; it thrives on getting together, on acting together in groups. We may agree then that one of the things we are "going to do about it" is to get back of our chapter, our society.

of interest in getting together is that when-

The first thing necessary to maintenance ever the group meets the members *shall be there.* That means two things; first, that the officers shall have provided something attractive and important to come for, and second, that the members shall have some conscience about attending.

My belief is, however, that morale thrives also on good fellowship—we need to play together as well as work together. Morale needs cheerfulness, optimism. The fun part of our meeting program may be as important as the serious part. Some of the important things that we can do are to undertake regional or city planning, public information in the press or on the radio, the study and promotion of standardization, mass production, low-cost dwellings, defense housing, architects in government work, correction of slum housing conditions, reform of antiquated building codes.

But morale requires some other things. One essential is to have the respect and confidence of the public. What the public best understands and applauds is the active participation by individuals or groups in those things that affect the welfare of the community, things such as slum clearance, social betterment, education, clean politics, good government, Red Cross.

Fundamental to the whole matter of morale is the question "What does the group stand for—what has it done—what is it going to do?" I cannot think of what architects *have* done without an immense pride that I am a member of a profession that has given the world the Parthenon, the Taj-Mahal, the Cathedrals of the Middle Ages, many of the public buildings of a former time and of this time, and my mind just fails to grasp the tremendous significance to our civilization of useful and efficient buildings for education, for the sick, for religion, for comfortable homes, for industry. We have had a useful and glorious past, we are justified in all of our pride in our profession. With such a heritage of memory can we lose our morale?

How about our future? Some say we shall not much be needed. There are some things that I am in doubt about, but there is one thing that I am certain of and that is that in the years ahead of us the architect will be needed more than ever he has been in the years past. Look back at the amazing record of the ever increasing use of the services of the architect. Not many years ago a few architects designed a few small buildings in this country, today not less than ten thousand architects have designed hundreds of thousands of buildings.

"Not much needed?" Well, we do not need to be told that in an increasingly complex civilization the great essential is *planning.* We shall plan for our homes, our institutions, our industries. We shall plan for the development of our towns, our cities, our countrysides. This planning will be done by those who are trained for planning.

In the coming re-building of our social structure, there is only one way in which our profession can fail and that way is to allow ourselves to be gripped by fear, by pessimism, by defeatism. We do not have to be told that fears and pessimism have been responsible for the loss of most great opportunities, and for the wreck of countless great causes.

But how can we be defeatists with such a heritage of a great past; with today, all about us, the visible, tangible evidence that the architects are a great body of highly intelligent, highly trained men, rendering indispensable service to our country; and above all, how can we be defeatists with possibilities for a future of opportunities for service, greater and more splendid than we have ever known.

Our morale shall not fail!

A SMALL BASE COMMISSARY CONTAINING STORES, BARBER SHOP, ETC. FOR THE MILITARY COMMUNITY

TROPICAL ARCHITECTURE

BY CARIBBEAN ARCHITECT-ENGINEER, NEW YORK

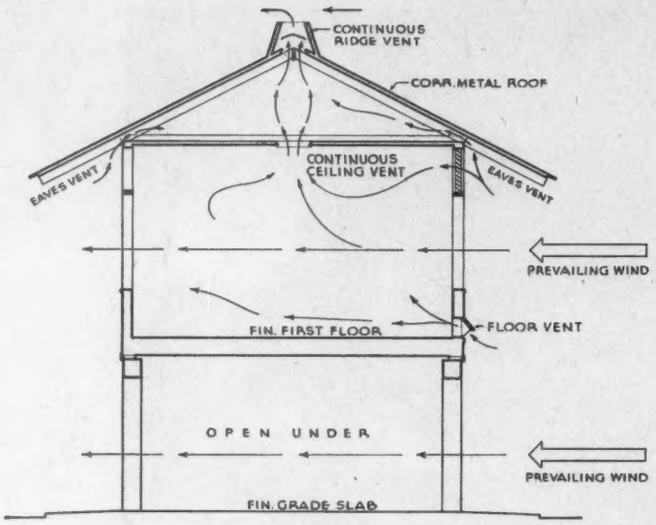
BASED ON AN INTERVIEW WITH RALPH T. WALKER, ILLUSTRATED WITH DRAWINGS BY CHESTER B. PRICE

When the announcement was made some months ago that designs for perhaps the biggest construction undertakings of the Defense program—namely, the advanced island bases leased from Britain to protect the Eastern Coast of North America from Newfoundland to the Caribbean—had been entrusted to four architectural firms with their engineering associates, the significance of this arrangement was not generally appreciated. The decision by the War Department to proceed thus rather than to undertake the whole job itself was based on a desire to utilize the most competent professional skills available, and implied recognition that the complex problem of transferring a substantial population from the temperate zone to a tropical area involved many important considerations other than military.

The southernmost group of bases centering around Trinidad was awarded to Caribbean Architect-Engineer, made up of the architectural firm of Voorhees, Walker, Foley & Smith, and the engineering firm of Parsons, Klapp, Brinckerhoff & Douglas.

Division of the work between the two collaborators was as might be supposed. The engineers were to take care of the heavy utilitarian construction and the more purely technical arrangements; while the architects were to be concerned with the design and scientific planning of the buildings and communities to accommodate the military population. Both the architects and the engineers of course worked closely with the military men assigned to the project.

The problem confronting the architects was to provide not merely shelter but to include facilities for a wide enough range of community activity to insure against deterioration of morale. All the arrangements had to be developed with full consideration for the tropical climatic conditions. The nerve-wearing effects of continuous heat, to which is added the extra irritation of an extended rainy season, the primitive jungle back-



DIAGRAMMATIC SECTION
SHOWING AIR CIRCULATION

ground with its insistently depressing quality and its exotic and sometimes deadly animal, plant, and insect life; the necessity for mingling at times with predominating numbers of native-born black and brown peoples of African and Asiatic racial stock—all these are factors of environment to which the white man must be adapted or against which he must be protected.

Obviously the first thing to be done was to make a thorough reconnaissance of the area involved and to accumulate all pertinent information regarding temperature range, rainfall, prevailing winds, terrain, indigenous building methods and materials, etc. Of these things the architects made a thorough study before setting about developing building types. They paid particular attention to observing the practical and ingenious means devised throughout the region by generations of permanent inhabitants to make life comfortable and safe from the elements and against disease. The result is that they have produced a series of designs that are not only economical of construction, but admirably adapted to the tropical conditions. This is indeed organic and functional architecture.

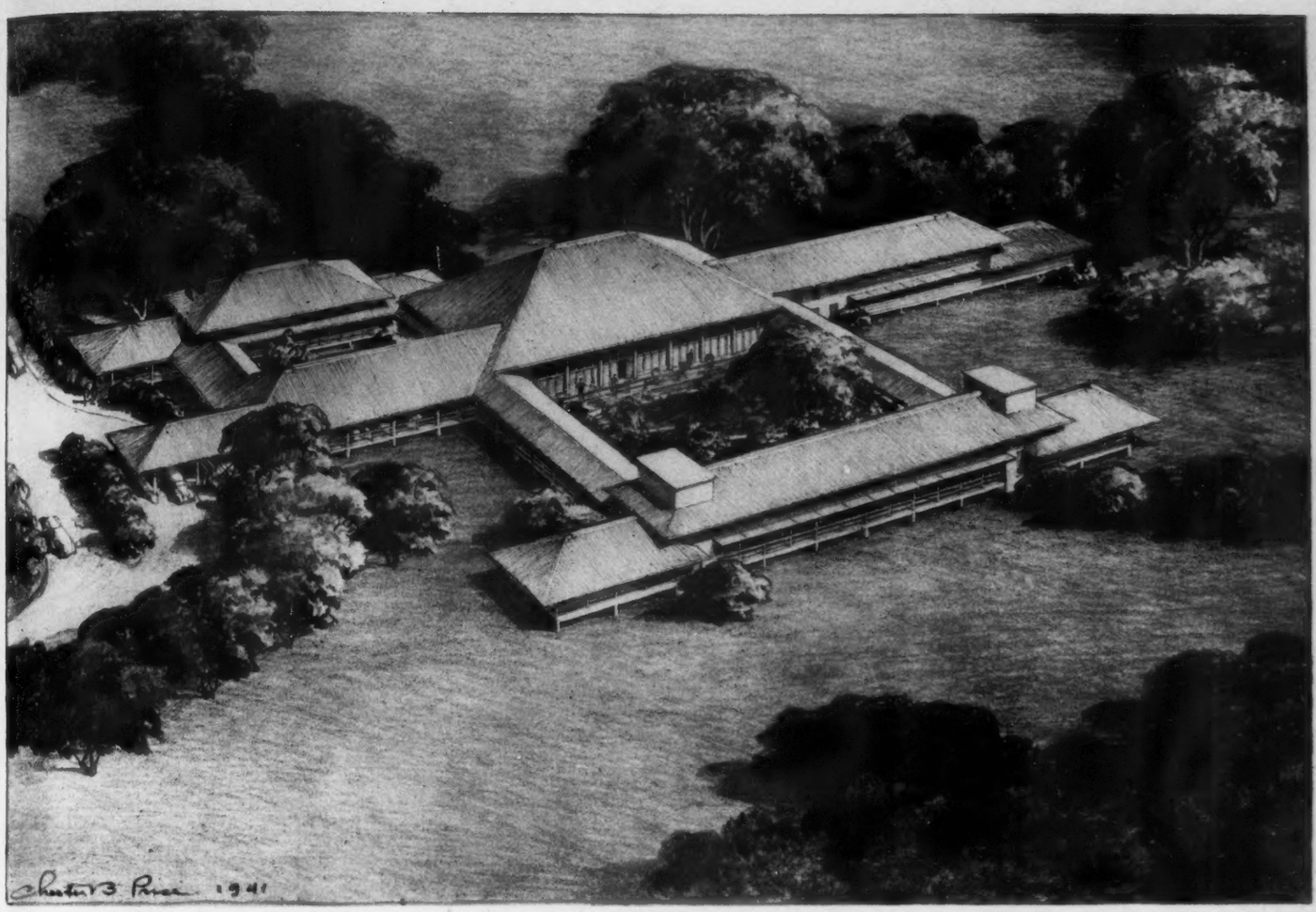
A number of these building types are illustrated in the following pages. They may be taken as representative of the architectural thinking. It will be noted that they are all placed with their long dimension at right angles to the prevailing trade winds, insuring full cross-ventilation. They have wide overhanging eaves and roof pitches designed to shed the voluminous rains and protect the walls and window openings. They follow much of the prevailing construction of the region, raised for the most part well above the ground on stilts, for protection against moisture, termites, and other vermin. Ceilings are high in all living spaces and, as will be noted on the typical section drawing herewith, natural means of ventilation are used to the fullest extent. Wood has been employed for most of the above-grade construction and galvanized corrugated iron coated with tar and asbestos compound for the roofing. This is in accord with local practice and has made for speed and ease of construction by native labor. The supporting posts and the ground floor platform slabs are of concrete. The finished grade is pitched away from the buildings on all sides and concrete ground-gutters are provided of ample capacity to carry away the waters of sudden torrents or prolonged storms. The architects have throughout been fully aware of the need for conserving "critical materials" and have used them only where no satisfactory substitutes could be devised.

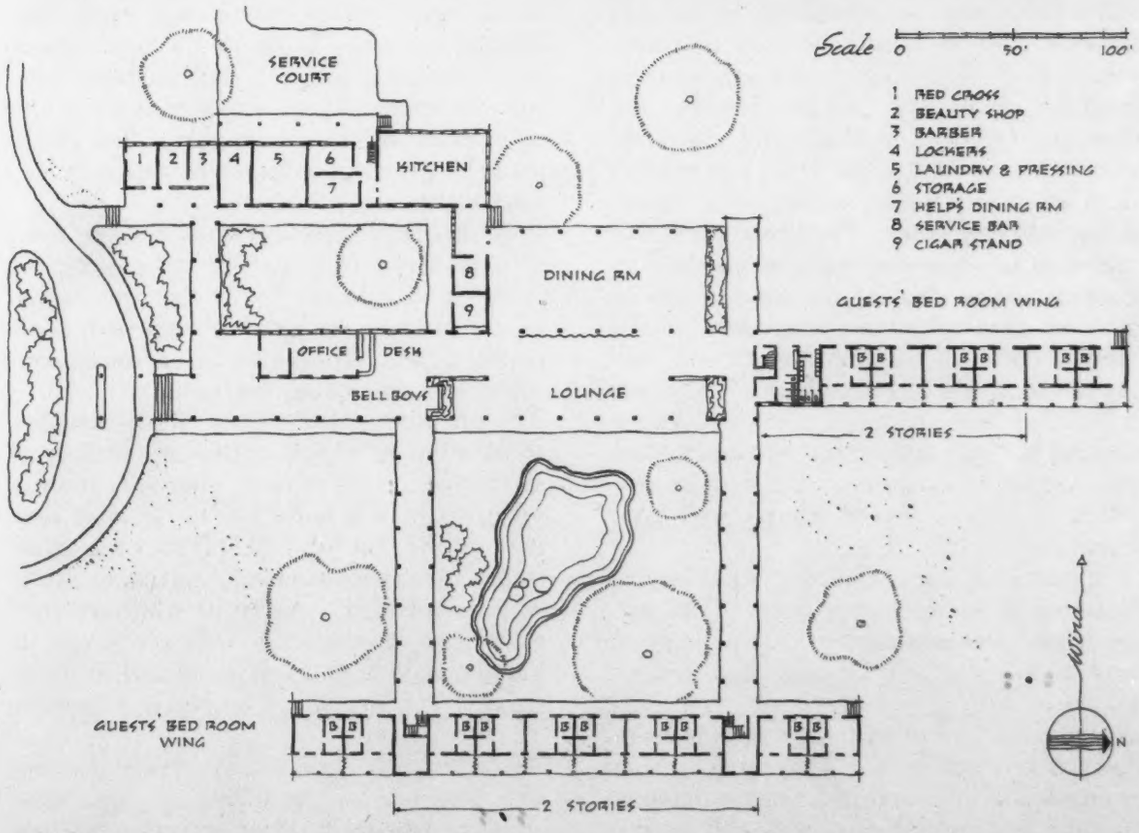
Inside the buildings the treatment is of the simplest with walls unsurfaced and structural members exposed, acknowledging not only the presumably unpermanent nature of the construction and the desirability of economy, but the need to avoid nesting places for vermin. The under side of the broad eaves, which extend out eight feet beyond the walls, is painted a light cream which reflects a pleasant, cool, diffused light into the rooms. Space, which is the tropical equivalent of air-conditioning, has been made as generous as possible wherever human occupancy is intended.

It is naturally undesirable to disclose here in print any information of military significance. It is sufficient to say that the matter of community design has followed good planning practice—guided by all sound considerations, including the military.

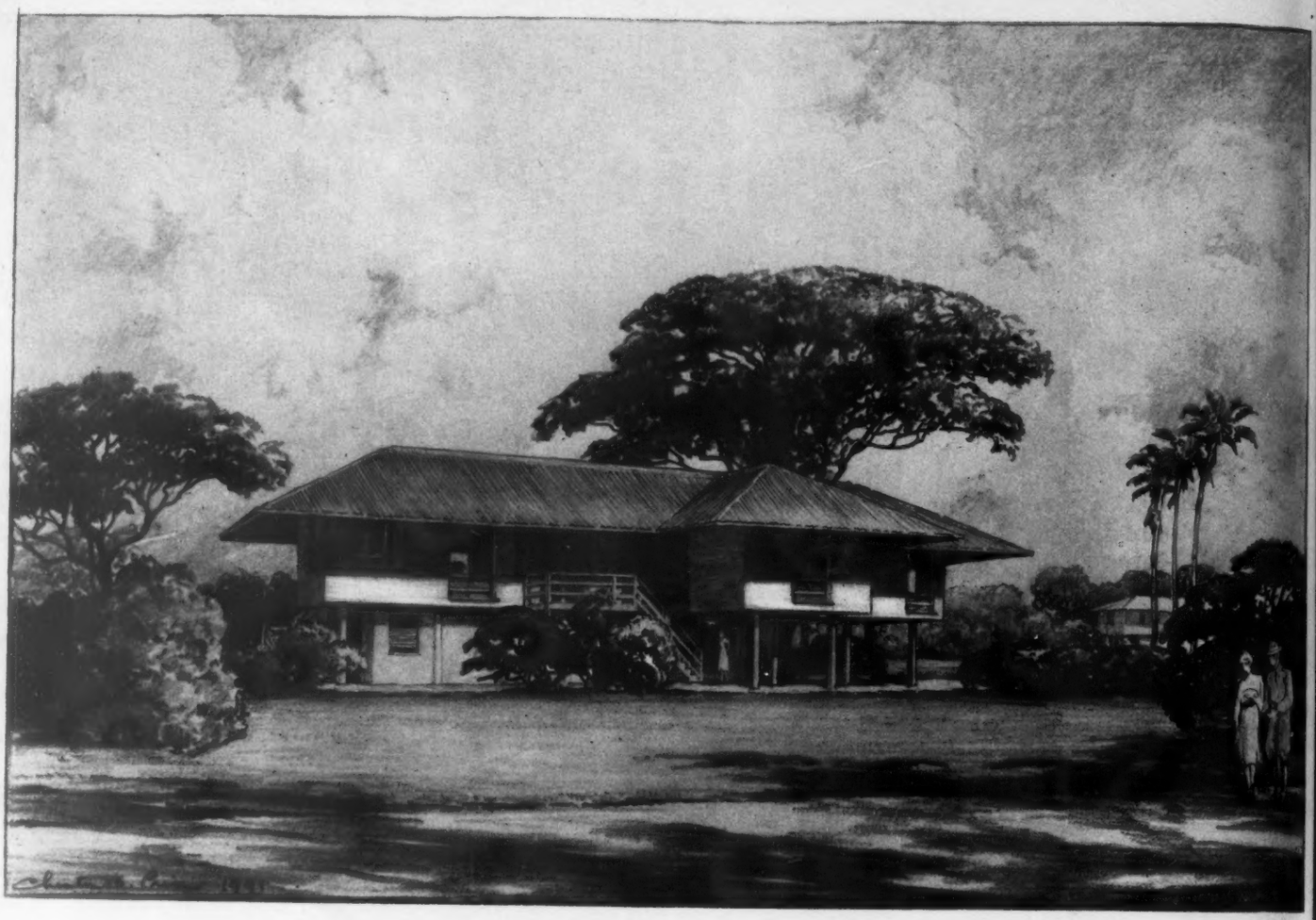
The architects have striven throughout for recognition of the fact that soldiers—even mechanized soldiers—are, after all, human beings with a specific job to do, and that they can do that job better if they are given comfortable, well-disposed quarters in which to live and work. All of us who want the soldiers to do their job well are happy to know that as high a quality of architectural thinking as is evident here was expended on their behalf.

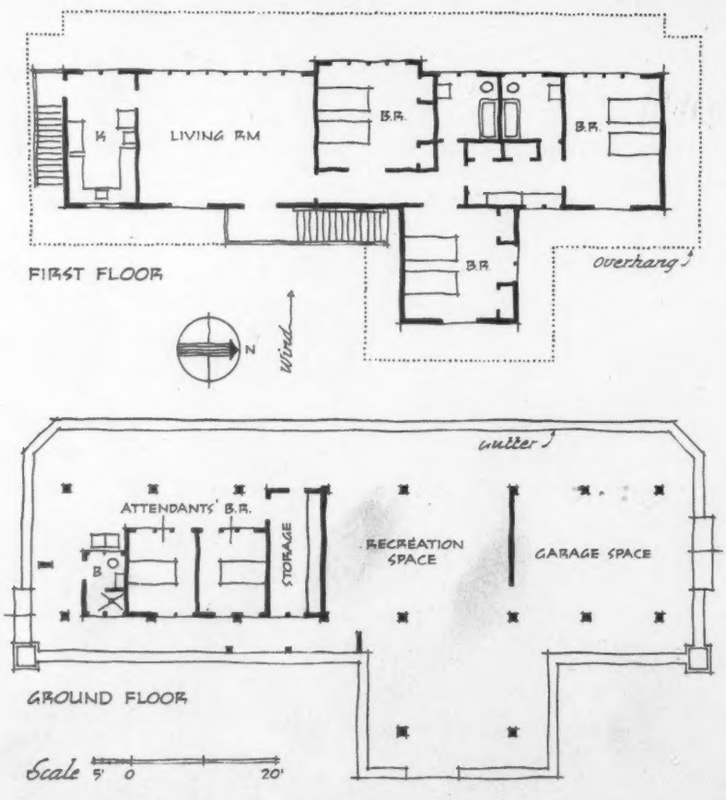
The admirably clear and expressive perspective drawings on the following pages were made by Chester B. Price, as interpretations of the architects' preliminary studies for the several building types.



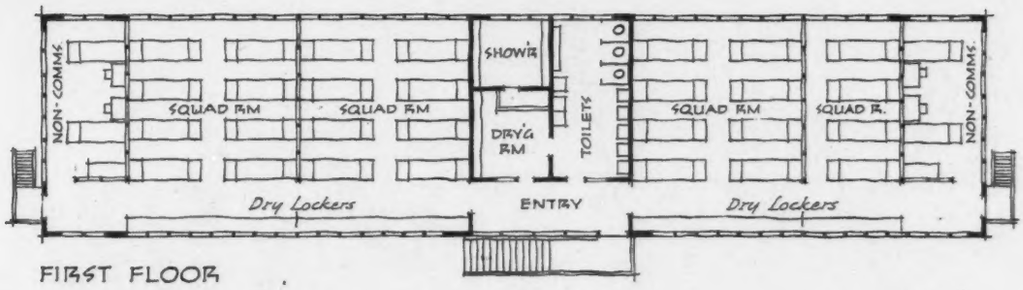


A TYPICAL GUEST HOUSE OR LODGING DESIGNED TO ACCOMMODATE OFFICIAL GUESTS, FAMILIES OF OFFICERS, AND OTHER TRANSIENT POPULATION. EACH OF THESE CAN CARE FOR ABOUT FIFTY PEOPLE





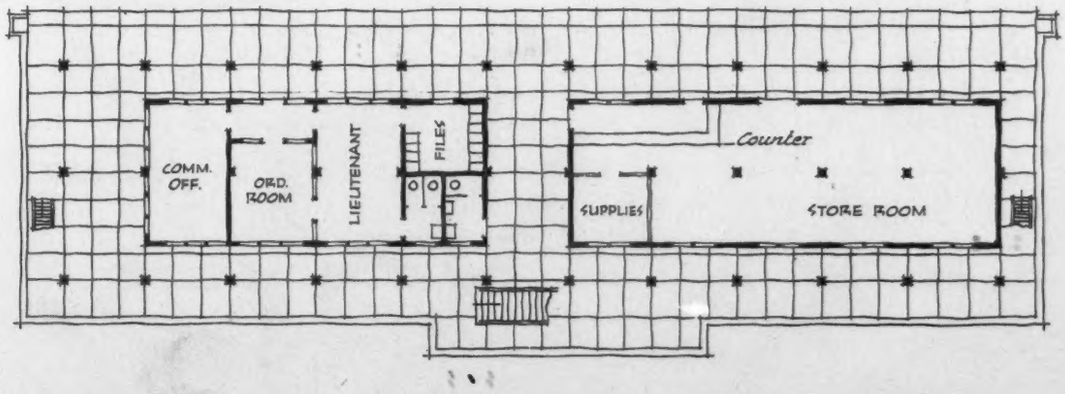
A TYPICAL COMPANY OFFICER'S HOUSE DESIGNED FOR COMFORTABLE LIVING UNDER TROPICAL CONDITIONS. THE PLAN IS AMPLE TO ACCOMMODATE ANY AVERAGE FAMILY LIKELY TO BE QUARTERED AT THE BASE



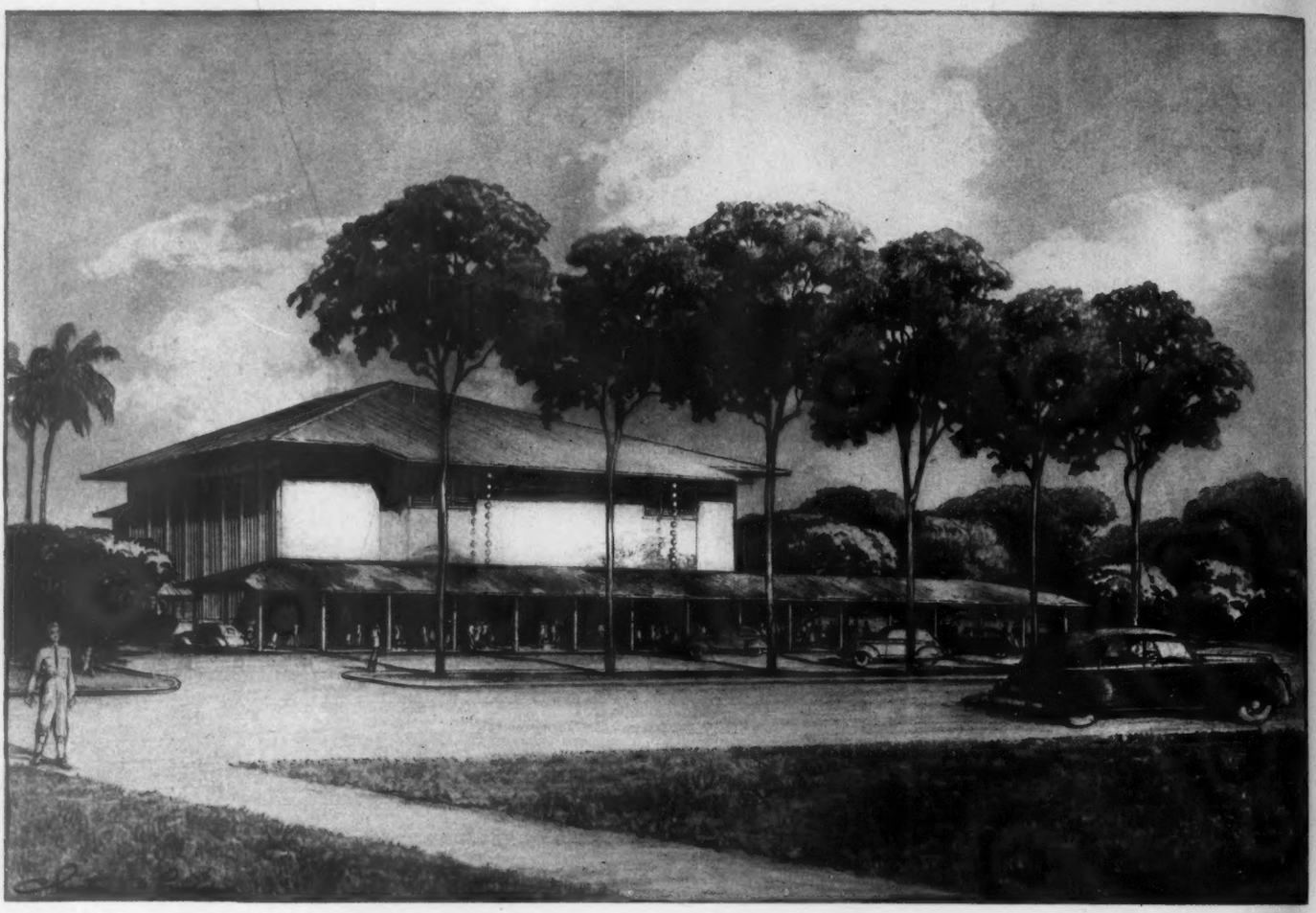
FIRST FLOOR

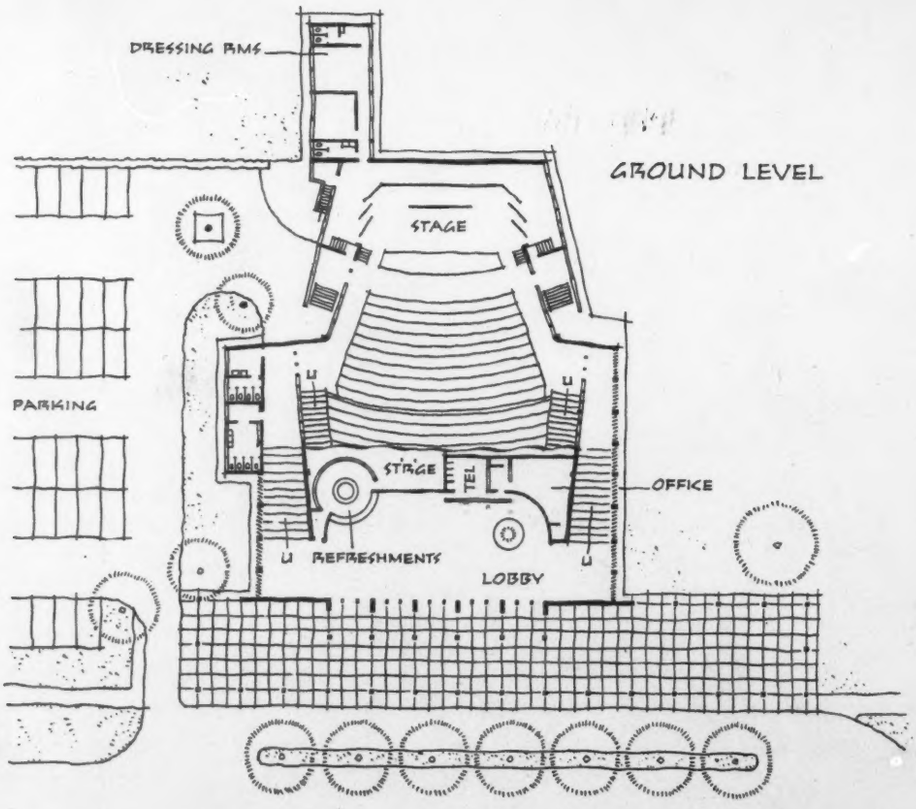
GROUND FLOOR

Scale 5' 0 50'

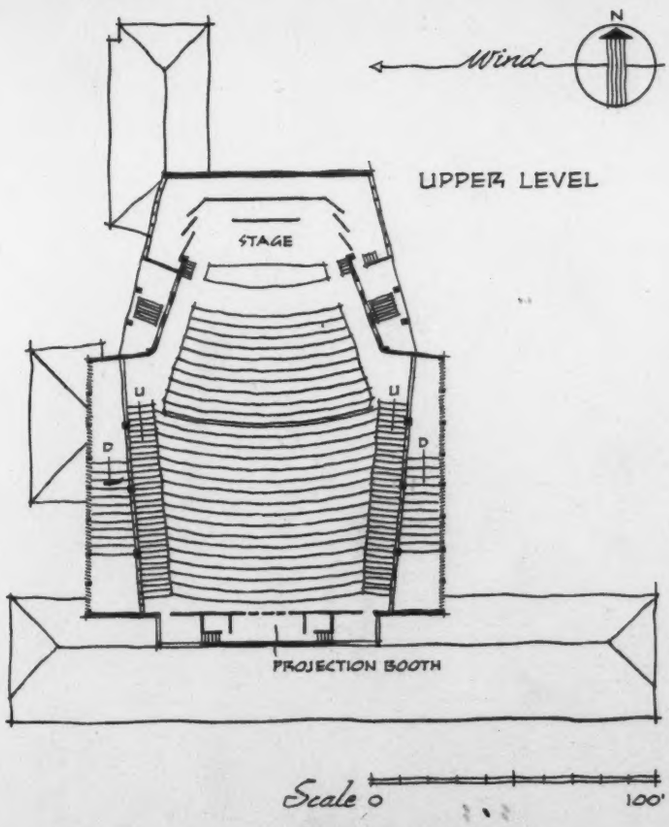


A TYPICAL BARRACKS FOR ENLISTED PERSONNEL AND SINGLE NON-COMS. SLEEPING QUARTERS ON SECOND FLOOR TAKE CARE OF FOUR SQUADS AND FOUR CORPORALS. OFFICES AND STORE ROOMS BELOW

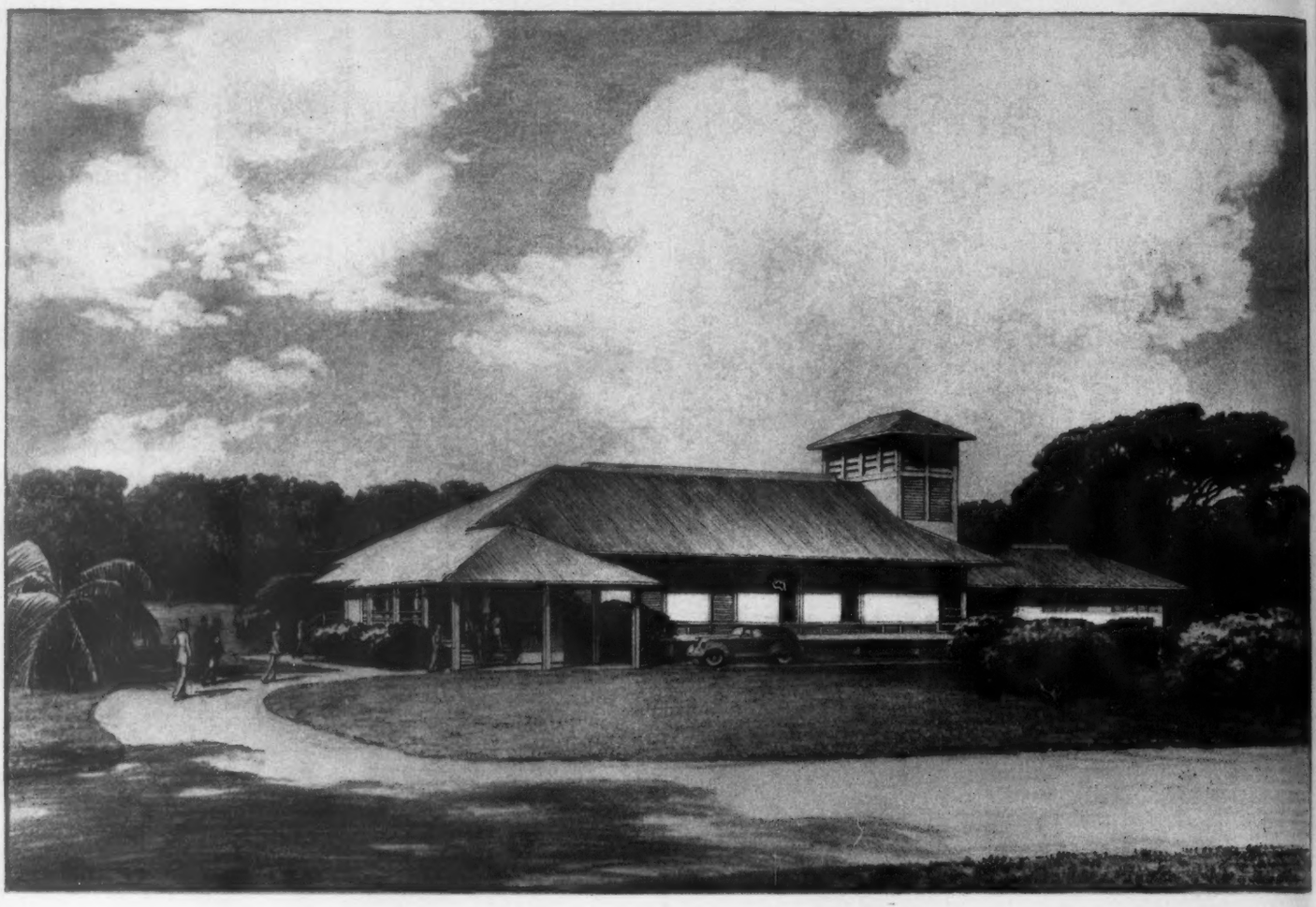


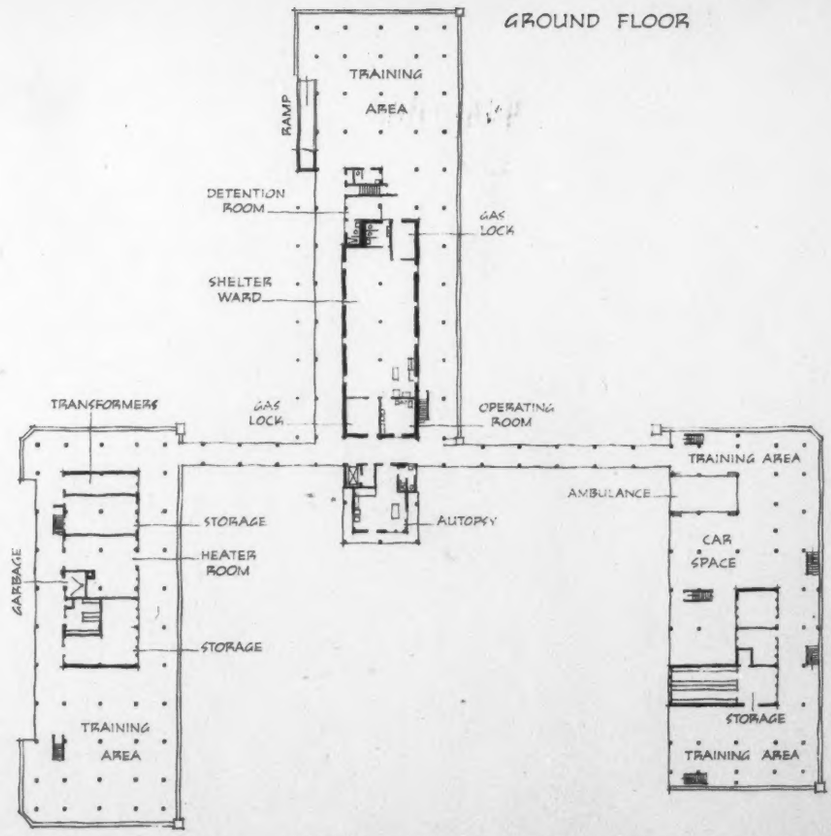


PROVISION FOR MAINTENANCE OF COMMUNITY LIFE REQUIRES FAR MORE THAN BARE PROVISION OF SHELTER. THIS THEATER AND SOME SMALLER ONES ARE PLACED CONVENIENTLY FOR THE MILITARY POPULATION

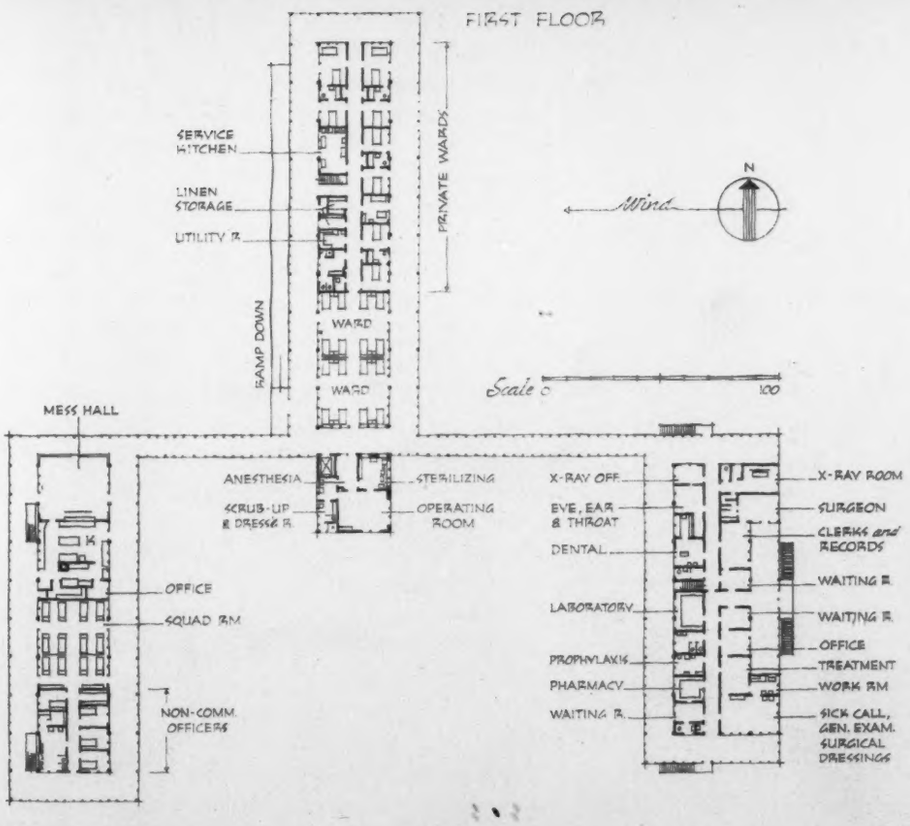


ANOTHER TYPE OF OFFICER'S HOUSE, USED AT ONE OF THE BASE AREAS, IS DESIGNED FOR SLIGHTLY DIFFERENT CONDITIONS BUT ESSENTIALLY THE SAME ACCOMMODATIONS AS THE TYPE SHOWN ON PAGE 740.

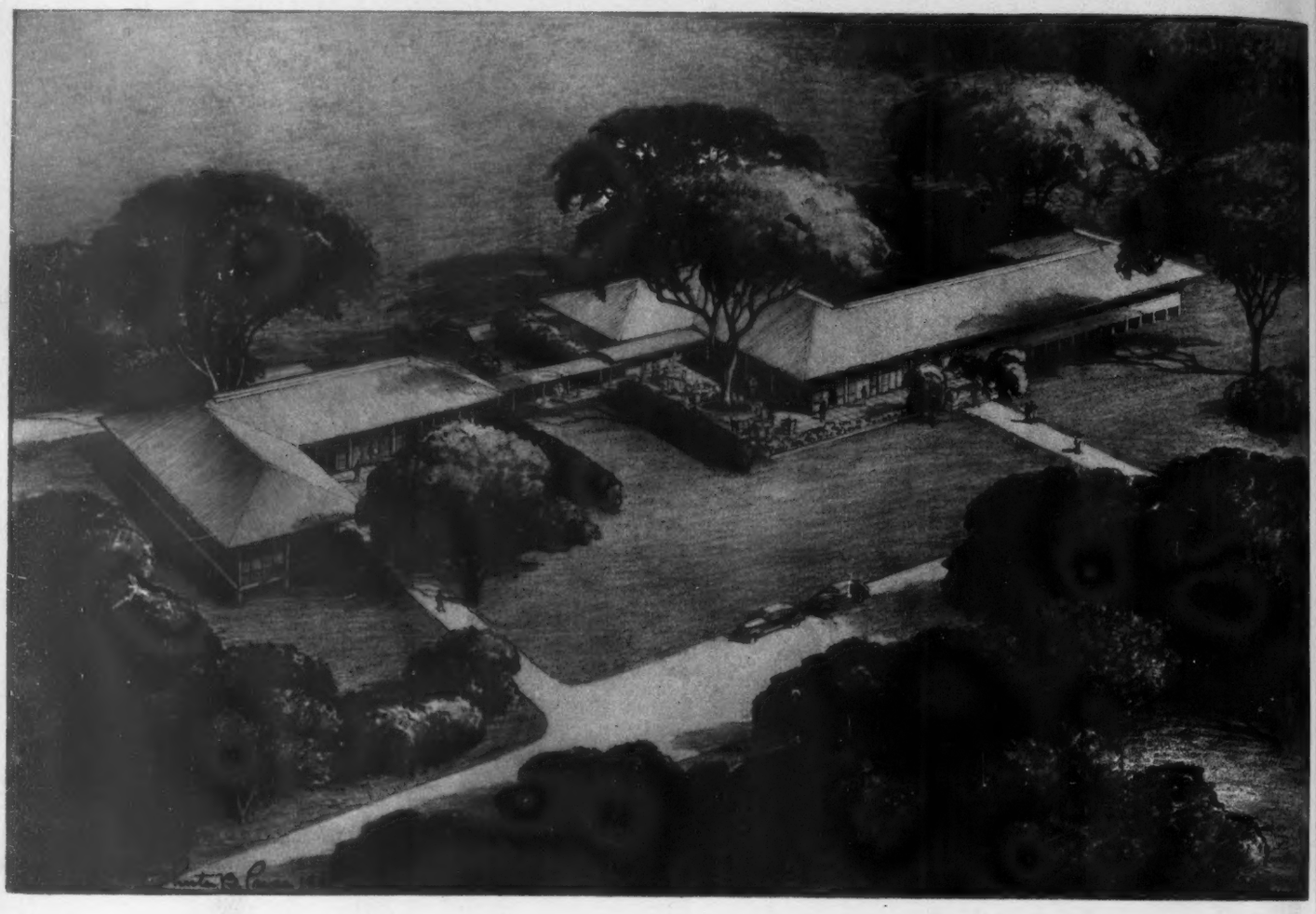


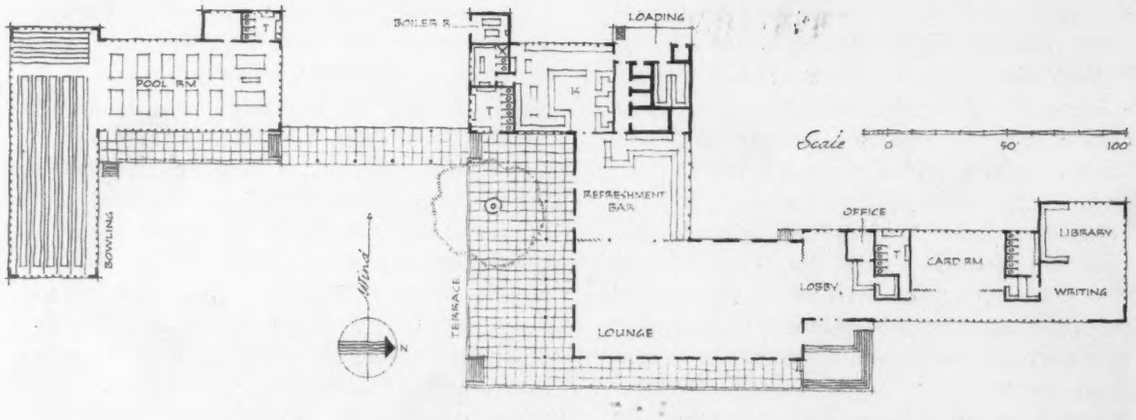


RELIGIOUS SERVICES UNDER THE DIRECTION OF ARMY CHAPLAINS ARE AFFORDED A SUITABLE ENVIRONMENT BY THE PROVISION OF CHAPELS LIKE THE ONE ABOVE. PLAN ON THIS PAGE RELATES TO HOSPITAL OPPOSITE



THE TYPICAL SMALL BASE HOSPITAL IS EQUIPPED FOR TWENTY-FIVE BEDS AND HAS ALL RELATED MEDICAL AND SURGICAL EQUIPMENT. SPLINTER-PROOF AND GAS-PROOF EMERGENCY WARDS ARE INCLUDED





SERVICE MEN'S CLUBS ARE A NECESSITY FOR THE RECREATION SO IMPORTANT TO MORALE. THIS ONE IS TYPICAL OF A NUMBER PROVIDED IN THE CARIBBEAN BASES, TO HOUSE A VARIETY OF ACTIVITIES

CAN WE PLAN ACTION IN CRISIS

OR ARE WE DOOMED TO MUDDLE THROUGH?

BY TALBOT F. HAMLIN

The recent priorities order cutting off, apparently without exception, all nondefense building has come as a rude shock not only because of its impact on architects and the building industry as a whole, but also because it would seem to indicate on the part of many of those in power a basic lack of understanding of the possible contribution of the building industry to American life. It also seems strikingly unaware of the actual conditions in and the make-up of the building industry, of its distribution as well as of its importance. With one stroke of the pen hundreds of architects and thousands of skilled laborers are deprived of the means of making their living, and a new and sudden unemployment crisis limited to one chosen group is inevitably produced, for under the present systems at work the absorption of builders and designers into other permitted fields will be, at best, fragmentary and will demand a long period of time.

What is the essential reason for this extraordinary order? Is it the problem of materials? Is it the danger of a labor shortage in defense construction because of the use of too much labor in non-essential building? It can hardly be the latter, for so far as I have heard construction companies have been able to run up defense factories with unprecedented speed and defense housing groups rise swiftly all over the country; this surely argues no real labor difficulty. Could it be that there are influences at work which hope, by throwing large masses of unemployed building workers on the market, to lower building wages when both taxes and the cost of living are rising? One hopes not. There remains, therefore, as the only possible cause for this action either a present or future shortage of materials needed for defense production—especially of the metals.

It is manifest of course that the defense industry is using unusually large amounts of metals, especially steel, aluminum, and copper. Yet there is little evidence of a real study of the productive potentialities of the country to produce these metals. The evidence that has been brought before the public is vague and often contradictory, and as yet no definite figures of the defense requirements or possible production have been brought forth to justify any such sweeping order. In other industries production has been ordered reduced in amount, but only the building industry seems to have been picked out for wholesale, sudden, and unprepared-for slaughter.

One wonders if this is really the most intelligent way to go about obtaining the necessary materials for defense production and building the necessary morale in the American people. Would not some form of rationing serve equally well and allow time for the tremendous displacements inevitable as well as for careful study of the possibilities latent in new substitute materials? Surely our boasted American ingenuity should be given an opportunity for studying all the possible methods of construction that do not use required materials or use only the minimum amounts of them. Either conditions with regard to materials in this country are much worse than we have been permitted to know, or else this order is thoughtless and highhanded.

The problem has two sides: the effect on the community as a whole and the effect on the building industry. The quality and the amount of the effect on the community as a whole will depend largely upon what is deemed essential defense construction. There is much work of a public nature crying to be done, which although but distant-

ly related on the surface to defense is certainly not luxury building and may be essential to community life and development. School buildings for example; many existing schools are obsolete and dangerous and make successful modern education a difficult if not an impossible matter. Shifts of population make new schools in new areas a constant need; are they to be considered essential for defense?

Housing not only for the lowest income groups but also for the middle income groups needs an enormous and constant amount of construction merely to keep pace with obsolescence. Are we suddenly to stop all housing work except that in areas where new defense industries have been placed? Will the cessation of effort to house people better in an old longstanding community really assist construction of new defense housing groups? Personally I doubt it, for the defense housing groups are apparently arising as fast as they can be designed and financed.

And what is obviously true of government and government-assisted housing and of schools is true only in a lesser degree of much other work—of many medium-cost houses, of buildings for charitable institutions. of hospitals. We had begun a most encouraging drive toward the creation of communities that would, because of their general excellence, be object lessons in what democracy can accomplish. To bring this effort to an untimely even if temporary end without the deepest and most painstaking consideration is to undermine one of the great means toward building popular morale.

It is not that one would wish the defense effort hampered by unnecessary building; it is merely that one looked for a more imaginative as well as a more realistic attack on the problem. How many reinforcing bars does it take to make a gun, and how many nails to make an airplane engine? Sacrifices would be made willingly if not eagerly if the building industry and the community could be convinced that they were making their sacrifices for a real need and not merely as a result of official thoughtlessness or stupidity.

The effect on the building industry also is important. It is unthinkable that Washington believes that thousands of skilled architects and draftsmen and tens or hundreds of thousands of skilled laborers in the building trades form a pariah class to be deprived suddenly of their means of livelihood by an arbitrary act. We doubt if much consideration was given to this fact at all, yet that in brute reality is the actual result. Already the effects are felt. Draftsmen and architects who have been busy and hopeful are suddenly workless and perturbed, not knowing what the future holds for them. And in the cities, especially the older and larger cities, the number of unemployed building-trades people is steadily rising.

This fact is of course partly the result of the dilemma of the decentralization of industry that has taken the country unawares; where architects and the building trades have congregated in the past, there precisely is the least of the new defense work. Again and again, although there has been a great deal of shifting, new local sources of labor have been developed, leaving the older, more experienced, more skillful people without work and, unless means are taken immediately to ameliorate the situation, without apparent hope. Here is a body of people, both designers and builders, trained, imaginative, with just the kind of technical and manual skill to be of the greatest use to the country as a whole, thoughtlessly exposed either to the necessity of quiet starvation or else of a complete change in their profession or work. Even at the best—even if all suddenly changed over from being architects or bricklayers or carpenters into becoming engineers' draftsmen or workers at defense machines—the result for the country would be little short of disastrous, for it would mean the disintegration of that one profession and that one industry for which there will be the greatest need the moment the emergency is over.

Besides it is manifest that no such complete transfer of personnel from one walk of life to another is possible. Little by little the necessary factories and housing groups for our defense needs will be completed—and at most their design is requiring only a portion of the professionally trained architects. As the campaign draws nearer completion the need for designers will become less, not greater, and it is clear that there are many architects who will never be absorbed into the defense effort—just as there are many building-trades people who can never find employment in camps or defense factories or defense housing groups—just as there are many too old to serve in the military forces. Many architects will close their offices, permanently or temporarily; many who must work to live will leave the profession for other fields of effort. In any case

the profession will be the loser, and when the emergency is over the country will be faced with a sudden disastrous shortage in trained technical services of the utmost importance.

Can nothing be done to change this gloomy picture? Must the building industry accept this ruling without protest? Surely not. Already protests against the priorities ruling have been many—from real estate interests as well as from the building industry. Yet so far (I write this early in November) the protests have been unorganized, futile, and to a large degree unconvincing. No protests can argue away the fact that a serious crisis exists and that a whole new pattern of material distribution is present in America, with the most profound reverberations in all walks of life——the building industry not excepted. Any protest to be effective must be based first on a full realization of this fact, and second on the equally important idea that the purpose of the protest is no mere matter of self-interest but is based rather on the obvious importance of the building industry to the country as a whole, now and even more in the future.

And the protest must be based on the united effort of the building industry as a whole. Architects alone, contractors alone, labor unions alone may protest as they will, but so long as their protests come only from their own limited groups and embody only the interests of those groups they will be largely ineffective. If, on the other hand, in addition to whatever protests these groups individually may wish to make there is also a concerted action on the part of all together toward a sane and unselfish attack upon the problem, such a protest I think will be most seriously considered.

How can this be brought about? There exist all sorts of vital organizations within the industry—labor unions of large membership and great power, contractors' organizations commanding great capital, the American Institute of Architects and the state societies of architects, as well as the housing and city planning groups. Every one of these should at once, it seems to me, appoint committees with power to correspond with similar committees in the other organizations with the aim of establishing at the earliest possible moment an emergency council of the building industry—a council which should represent capital, labor, technical design, and creation. Such a council should be financed with a sufficient fund to enable it to conduct studies, publish the results of these studies, and exert whatever power wide publicity and true vision could between them possess. It should at once get in touch with the various Washington bodies involved and attempt to develop a cooperative feeling with them rather than use obstructive tactics. It should first of all attempt to find out the real facts of the situation and to discover exactly how much metal is being used month by month, both now and as far as possible for the next few years. It should attempt to correlate these against the supplies available and other permitted nondefense uses, in order that the building industry as a whole might receive the share due it because of its innate usefulness and social values. It should make sure that shortages are not merely like Mr. Ickes's gasoline shortage. This would be only a beginning. On the basis of this information it should then start a technical study of the possible uses of nondefense materials of all kinds, of various methods of building (from *pisé de terre* up) in which metal is minimized, and of various substitute materials for flashing, for tension reinforcement in concrete, for connections, and even for mechanical equipment.

It should then, it seems to me, also institute a study of the actual social value of the building industry and its economic implications—questions dealing with the market for buildings, the necessity for buildings—and by this study try to arrive at some criteria by which the necessity for nondefense buildings could somehow be ranked, so that at least a beginning could be made on some sort of intelligent rationing of building materials, perhaps voluntarily entered into by the building industry. Once such a council was formed, the benefits that might flow from it would be so great that it would very probably remain as a permanent feature even after the immediate need for it had ceased. At the present time there is no organization where all of the interests affected can meet on a common ground with the common aim of national human service. And, too, when the war ends—as some day, God grant, it will —there will probably be an instant call on American designers and builders, on American building materials and building skills, to help in the reconstruction of Europe. If when the call comes an organization such as this proposed council existed, the answer to the call would be both more speedy and more efficient.

Another function of such an organization could be a regional study to find out where

the greatest need for material and personnel lay, and where the greatest supplies were. At present an architect, say in New York, even if he wished to move to a place where his talents would be of greater use and the immediate need for them more acute, has only the vaguest information to go upon—information from friends, accidental contacts with individuals, or the mere locations of projects published in the architectural press. Such an impersonal regional study could do much to give an actual basis in fact on which definite plans could be made. It would remove some at least of the accidents of employment or unemployment.

As it affects architects this crisis has revealed many of the deficiencies in professional idealism. The Institute seems to have been too much occupied with the problems of the individual architect and of individual practice. Despite its committees on city planning and housing matters, on legislation and education, it has so far failed to give to its members the high idealism of all true professional activity—the idealism of service to the nation and the world. In one sense, speaking brutally, it is fairly unimportant whether Jones and Smith close up their offices today and go into advertising or real estate or merely retire, but what is of vital importance is the fact that the particular training and skill of Jones and Smith—a training and a skill that enable them to see a problem large and to see it whole, and to create from that problem the most efficient and beautiful and humanly useful forms, which shall actually be built in definite materials as real things—is something the country needs terrifically and will need with ever increasing intensity. What is important is that this skill shall be available when and where it is needed, and not dissipated, forgotten, and lost. This is the one ground on which the architect can demand to be heard at this hour, and it is the ground on which he can ask confidently for the utmost consideration. If the country is once convinced of this necessity and of the ability and readiness of architects to furnish this kind of design leadership, then, whether buildings are built now or not, some means will be found not only to make use of this skill but also to enable the architect to live during the process.

There has been much talk about a reservoir of designed public improvements to take up the slack of unemployment after the war. In any such project the architects and the city planners should have a preeminent voice, and their services could be employed profitably for years in developing such a project. Whether or not this will be true will depend, at least partly, on the architects themselves—on their readiness to see the opportunity and to seize it, on their ability to cooperate with the other sections of the building industry, on their aggressiveness in asserting their power in order to assure the public the benefit of their skill. The time is short—the time was really yesterday or the day before—and every Institute member and official, every state society member and officer, should be thinking and working toward this end.

In the meanwhile the architect must do his utmost to put himself in position to render the service that would be required of him. I have spoken before of the blindness of many architects in matters of community planning and community responsibility. I cannot but emphasize the fact again, for it is along the lines of much basic replanning of communities and portions of communities that the future of the architectural profession lies. At a time like this it is useless for the architect to go to the government for permission to design and get built a house to be the plaything of a millionaire; but if the architect comes to the government as the servant of the public, as the man above all others fitted to make the democratic environment a healthy and emotionally satisfactory one, he can demand a hearing and, moreover, expect to be heard.

THREE RECENT BUILDINGS

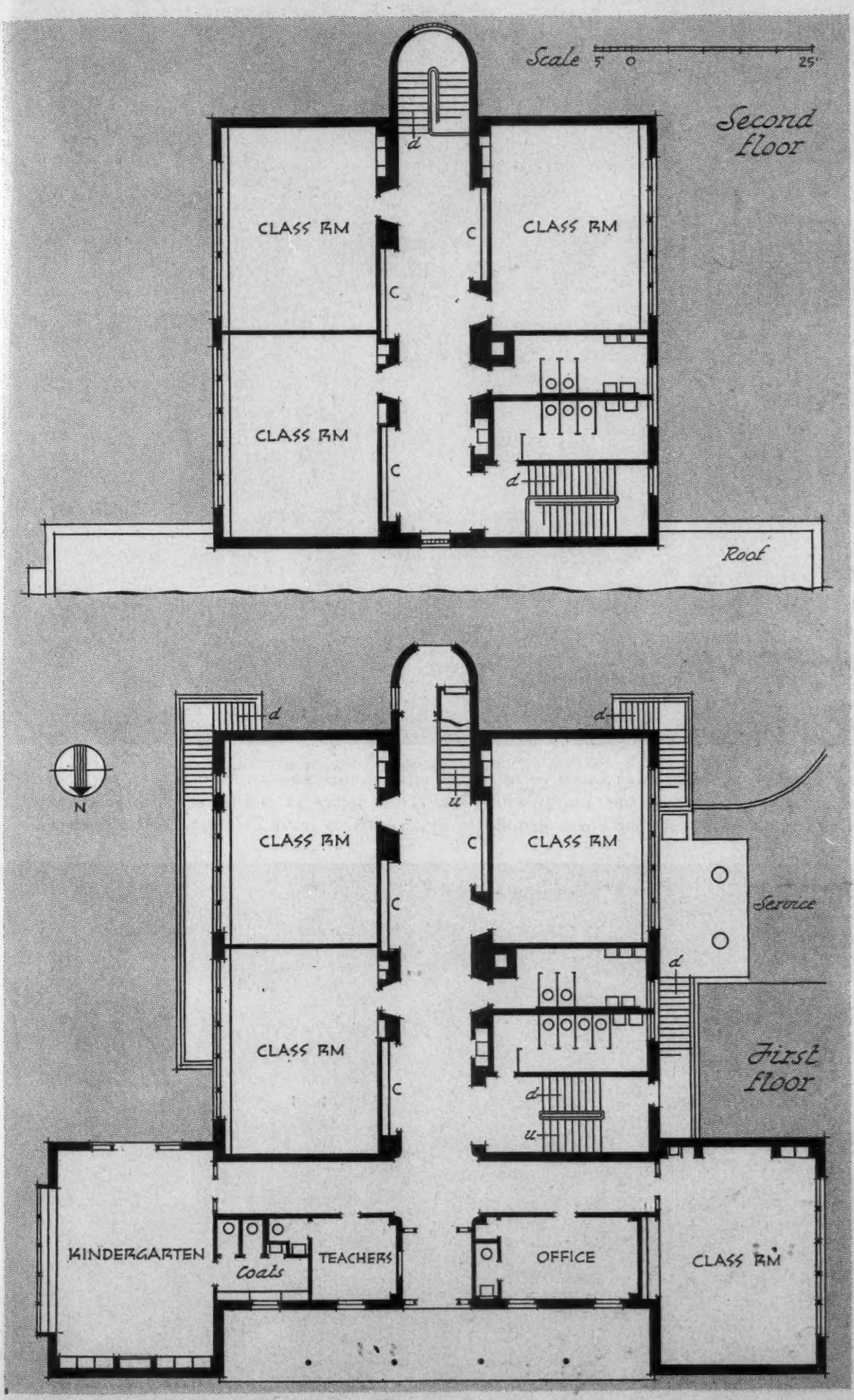
BY HOLABIRD & ROOT, ARCHITECTS, OF CHICAGO

REPRESENTATIVE OF THE FORTHRIGHT MANNER IN WHICH HOLABIRD & ROOT DESIGNS BUILDINGS FOR EDUCATIONAL PURPOSES ARE THE GRIMES SCHOOL AND CLARK FIELD HOUSE AT BURLINGTON, IOWA, AND THE PATTEN GYMNASIUM AT NORTHWESTERN UNIVERSITY, EVANSTON, ILLINOIS; SHOWN HERE AND ON THE FOLLOWING PAGES IN PHOTOGRAPHS BY HEDRICH-BLESSING STUDIO, CHICAGO. THE VIEW (ABOVE) OF THE PLAYGROUND SIDE OF THE GRIMES SCHOOL AND THE CORRIDOR INTERIOR (RIGHT) EMPHASIZE THE IMPORTANCE OF THE CURVED PANEL OF GLASS BLOCK THAT LIGHTS THE PRINCIPAL STAIRWAY OF THIS ELEMENTARY SCHOOL. CONSTRUCTION IS STEEL AND BRICK

GRIMES SCHOOL – HOLABIRD & ROOT, ARCHITECTS, CHICAGO

THE ENTRANCE TO THE GRIMES SCHOOL (ABOVE) IS SHELTERED BY A SEVERELY-PLAIN PORTICO, HIGH ENOUGH TO GIVE AMPLE LIGHT TO THE WINDOWS OF THE ADMINISTRATIVE OFFICES FLANKING THE VESTIBULE (SEE PLAN ACROSS PAGE). AT THE LEFT ARE SHOWN TWO VIEWS OF THE FIRST AND SECOND FLOOR CORRIDORS, BOTH EQUIPPED WITH LOCKERS FOR PUPILS' USE

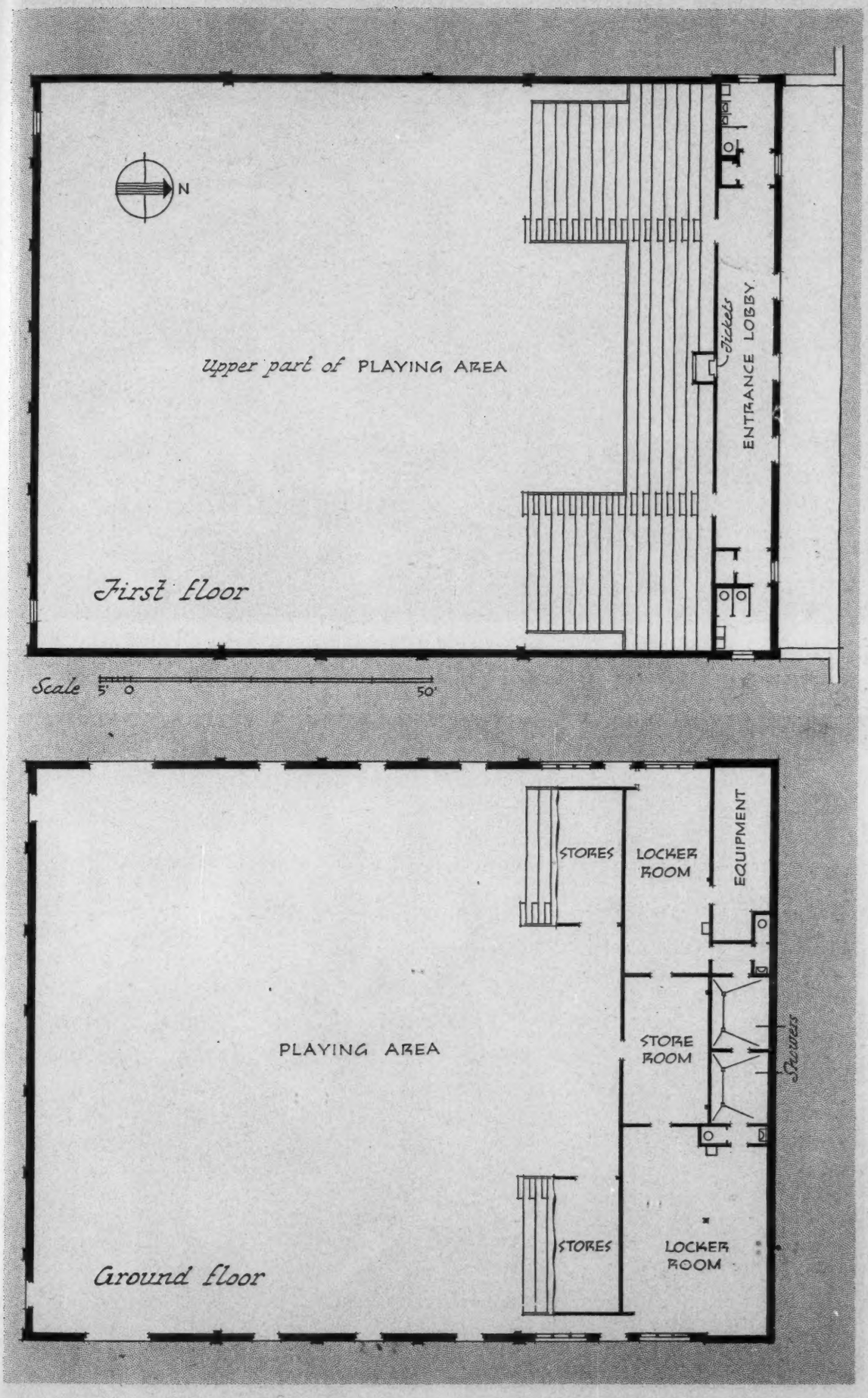
GRIMES SCHOOL – HOLABIRD & ROOT, ARCHITECTS, CHICAGO



GRIMES SCHOOL – HOLABIRD & ROOT, ARCHITECTS, CHICAGO

PARTICIPANTS IN SPORTS HAVE ACCESS TO THE CLARK FIELD HOUSE THROUGH DOORS AT THE LEVEL OF THE PLAYING FIELD (VIEW OF SIDE ABOVE) WHILE SPECTATORS ENTER AT THE UPPER LEVEL (VIEW BELOW) THROUGH DOORS INTO A LONG LOBBY BEHIND THE FIXED VIEWING STAND. (SEE ALSO PLANS ACROSS-PAGE)

CLARK FIELD HOUSE – BY HOLABIRD & ROOT, OF CHICAGO



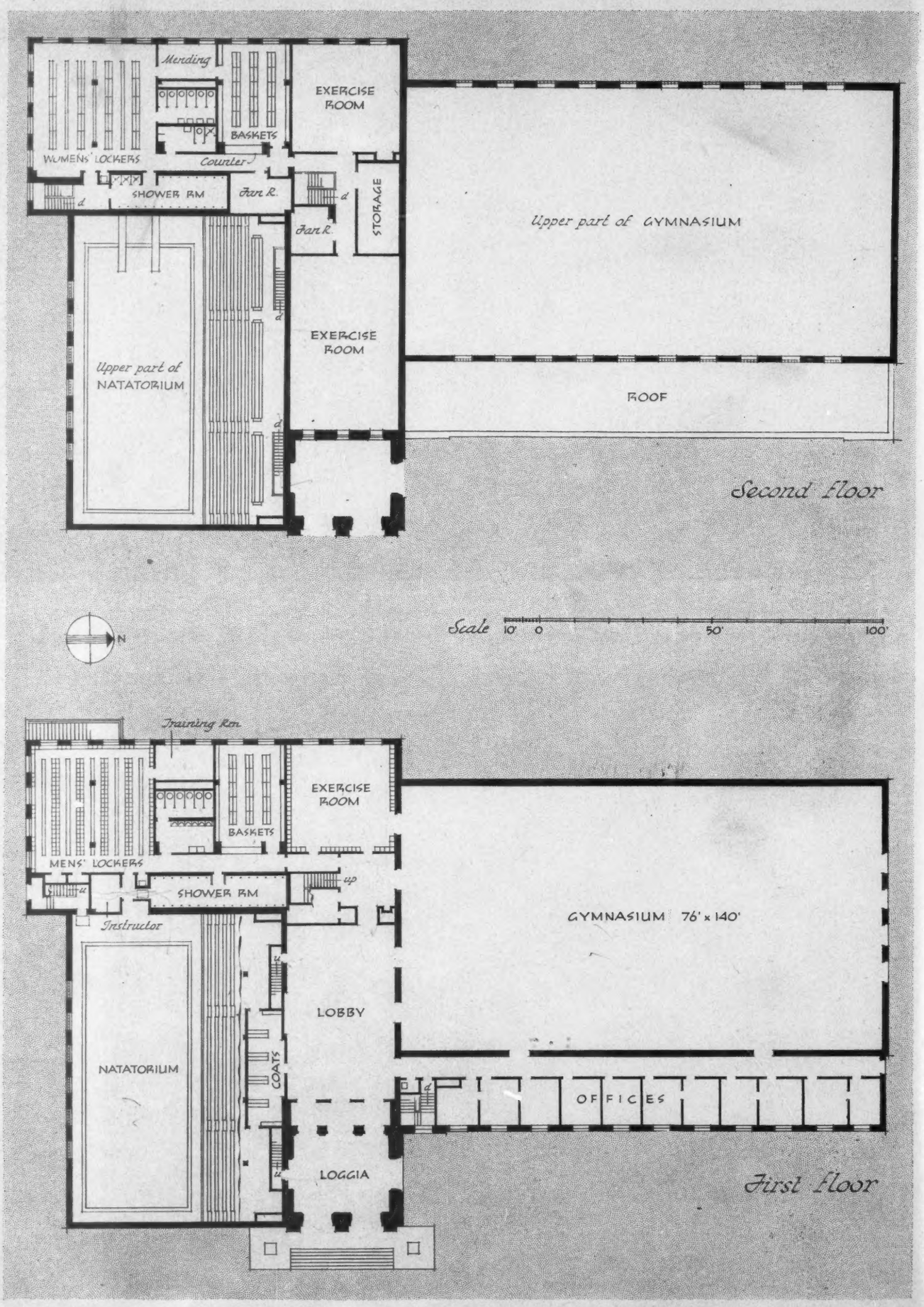
CLARK FIELD HOUSE – BY HOLABIRD & ROOT, OF CHICAGO

GYMNASIUM AND SWIMMING POOL ARE THE PRINCIPAL UNITS OF THE PATTEN GYMNASIUM BUILDING OF NORTHWESTERN UNIVERSITY (SEE PLANS ON PAGE 758). THE VIEW ABOVE SHOWS THE ENTRANCE LOGGIA

PATTEN GYMNASIUM — BY HOLABIRD & ROOT, OF CHICAGO

ANOTHER VIEW OF THE EAST FACADE, LOOKING BACK AT THE ENTRANCE PORTICO, ILLUSTRATES THE DISTINCTIVE HANDLING OF CUT STONE. THE WINDOWS LIGHT OFFICES (ALL PHOTOS BY HEDRICH-BLESSING)

PATTEN GYMNASIUM — BY HOLABIRD & ROOT, OF CHICAGO



PATTEN GYMNASIUM — BY HOLABIRD & ROOT, OF CHICAGO

OUT ON A LIMB

HOROSCOPE FOR ARCHITECTS AFTER WAR

BY EUGENE RASKIN

These are wild days for architects. Some of us are working our heads off on defense or near-defense jobs, while the rest are running around in circles trying to make intensifying shortages meet the needs of a dwindling private clientele. Few of us, understandably enough, have the time or the surplus mental energy, what with our grueling days, to sit down of an evening and try to form a picture of the conditions of practice that will prevail after the war is over. Yet this is something we must do. If we are to survive as a functioning part of a changed world (and changed it will be) we must make a guess—it had better be good—as to what we shall have to face, so that we may act accordingly. Otherwise we may find that in the general rearrangement of the scheme of things, we have been left out.

The following, good or bad, is one man's guess. The guesser is sticking his neck out on a limb where angels fear to tread, as the saying goes, and he knows it. Your disagreement is warmly solicited. The guess is in two parts, based upon two eventualities.

IF HITLER WINS:

(a) We will go fascist. Expert opinion seems pretty well agreed that even without a military defeat of the United States, a world whose trade channels and propaganda media are Nazi-dominated will force us to adopt the totalitarian pattern. This means State (and Party) control of everything, including architecture.

(b) If you want to practice architecture, you had better be a good boy, with a permit to walk the streets and pursue a profession. Your commissions will come from the State, the Party, officials and favorites—all synonymous under totalitarianism. A "gauleiter" for architecture will dictate design, materials, construction, fees. It will help if you are a "gauleiter" yourself, or a good friend of one. You can forget about private practice.

IF HITLER IS BEATEN:

(a) We shall have to remain armed for a goodly time—perhaps many years—to help enforce the peace, police the world, hold off industrial and financial collapse, and avoid the risk of being caught again with our panzers down. This means continued concentration of our national efforts and consequently continued exercise of emergency controls—priorities, prices, financing, labor.

(b) If you want to practice architecture, you might as well recognize that the Government, directly or indirectly, will be your principal client. The private citizen, as is already becoming evident, will stand little chance of building for purely private purposes. You will do well to get into some field where activity is likely—defense housing, factories, camps, fortifications, etc. A good friend in the right spot will do no harm. You can forget about private practice.

This does not mean to say that one outcome is no better than the other. No sane and feeling human can fail to appreciate the world of difference between the two. Nor does it mean that the architect as a creative artist will be washed up. Society will always need the special abilities of the architect—analysis, imagination—and will make a place for him, even though his specific role is far different from that he plays today.

A SUITE OF SHOWROOMS

DESIGNED BY DARVEED, INC., OF NEW YORK, FOR

NEIMAN-MARCUS DALLAS, TEXAS

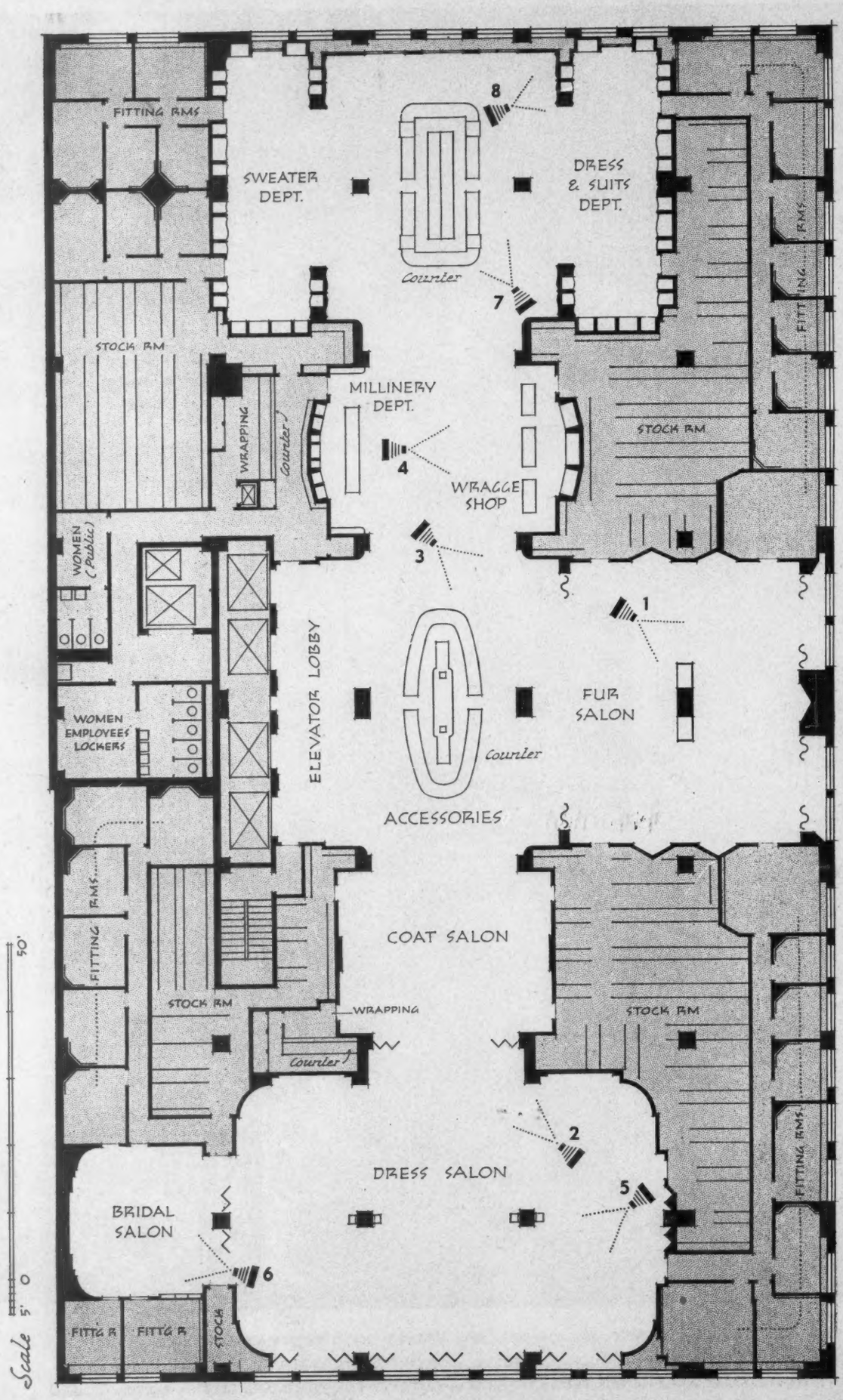
1 THE LUXURIOUS SETTING FOR MERCHANDISING FURS AND EXCLUSIVE LINES OF WOMEN'S APPAREL SHOWN HERE, OCCUPIES THE ENTIRE SECOND FLOOR OF THE NEIMAN-MARCUS SPECIALTY SHOP, RATED AMONG THE THREE TOP-PLACE STORES OF ITS TYPE IN THIS COUNTRY. ABOVE: FUR SALON

MERCHANDISING BACKGROUND—RENE C. BRUGNONI, ARCHITECT

VISTAS THROUGH THE SUITE ACCENTUATE THE SPACIOUS TREATMENT. THE PRINCIPAL ROOMS ARE CONNECTED BY SPECIALIZED AREAS SUCH AS THE COAT SALON ABOVE (SEE PLAN ON PAGE 762). ADJACENT TO THE SALES AREA AMPLE FLOOR SPACE WAS RESERVED FOR STOCK AND FITTING ROOMS

2

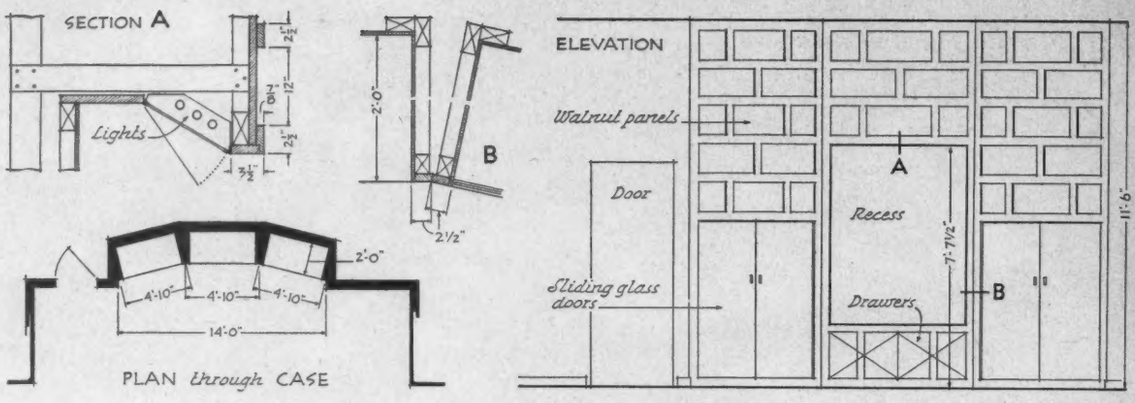
AND T. H. ROBSJOHN-GIBBINGS, INTERIOR DESIGNER, NEW YORK



MERCHANDISING BACKGROUND–RENE C. BRUGNONI, ARCHITECT

IN THE BEIGE-AND-GREEN FUR SALON A DOUBLE DISPLAY UNIT OF MIRROR AND GLASS SCREENS FACES THE ELEVATORS. DAYLIGHT IS ADMITTED TO THIS SUITE FROM THREE SIDES AND, IN ADDITION, AN ELABORATE INSTALLATION OF HOLOPHANE AND CENTURY FIXTURES LIGHTS THE SALES AREA AND SPOTLIGHTS DISPLAYS. (PHOTO ABOVE BY PARKER-GRIFFITH. OTHER PHOTOS ARE BY ELWOOD H. PAYNE) 3

AND T. H. ROBSJOHN-GIBBINGS, INTERIOR DESIGNER, NEW YORK



4 A SPECIALIZED SALON CORRESPONDING TO THE COAT SALON (SHOWN ON PAGE 761) IS THE SPORTS SPECIALTY ALCOVE (ABOVE) PANELED IN WALNUT. THIS IS IN THE ROOM LEADING TO THE SPORTS APPAREL SHOP (SEE PAGE 766). RECESSED STOCK RACKS ARE PROTECTED BY SLIDING GLASS DOORS

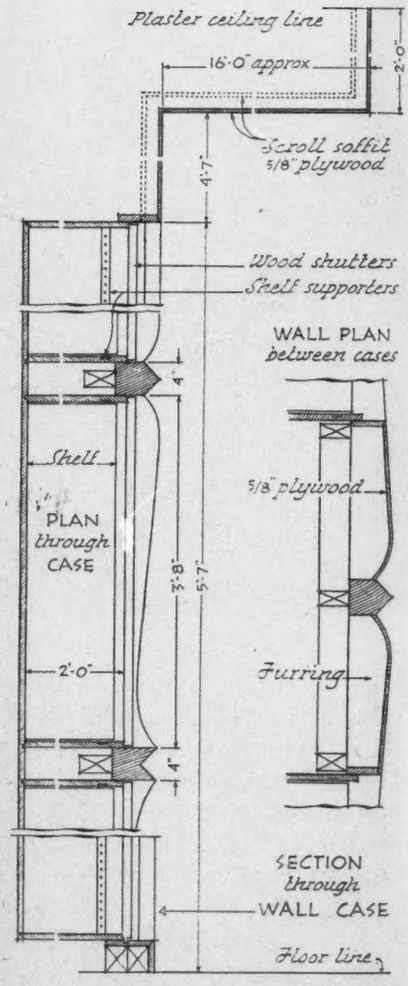
MERCHANDISING BACKGROUND—RENE C. BRUGNONI, ARCHITECT

5 THE PRINCIPAL SALON FOR SHOWING DRESSES AND COATS IS FLOODED WITH DAYLIGHT THAT SPARKLES ON GLASS SCREENS AND MIRRORED COLUMNS. THE COLOR SCHEME IS GRAY AND YELLOW

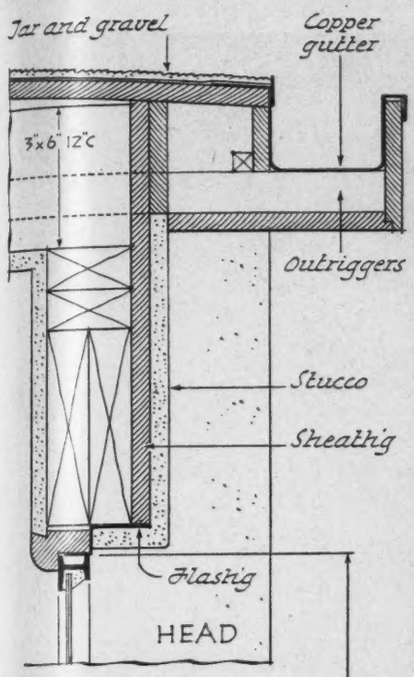
6 A BEAUTIFULLY FITTED BRIDAL SALON (RIGHT) DECORATED IN PINK AND WHITE OPENS BEYOND

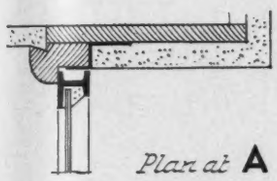
AND T. H. ROBSJOHN-GIBBINGS, INTERIOR DESIGNER, NEW YORK

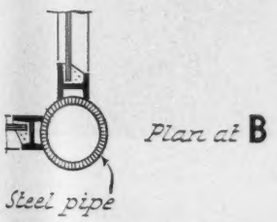
AN EFFECTIVE COUNTER-CASE IS THE FOCAL POINT OF THE SPORTSWEAR SHOP 7

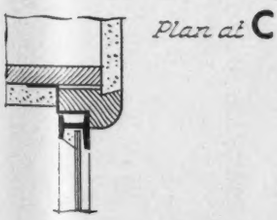


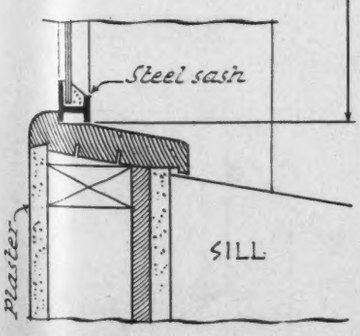
8 THE DECORATIVE SCHEME OF THIS APPAREL ROOM IS GREEN, YELLOW, AND TAN





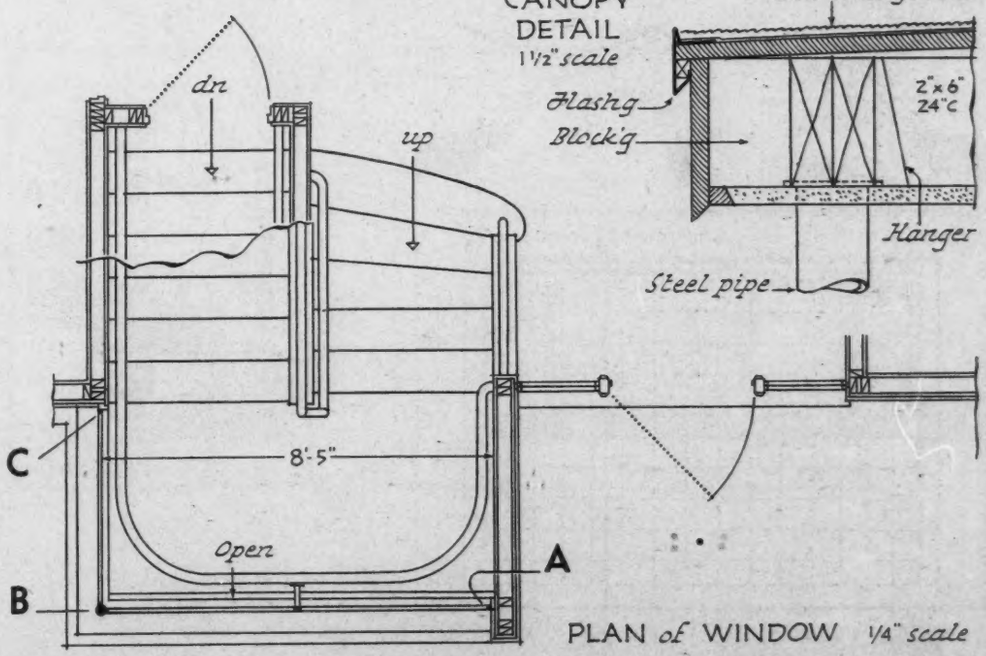




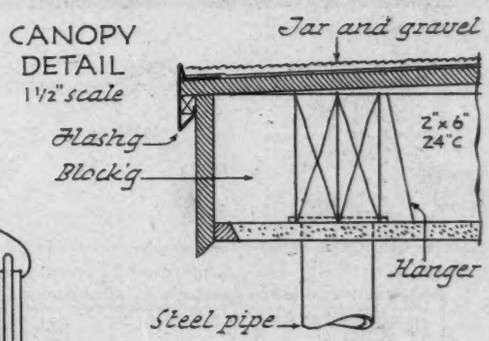


17'-8"

WINDOW SECTION
1½" scale

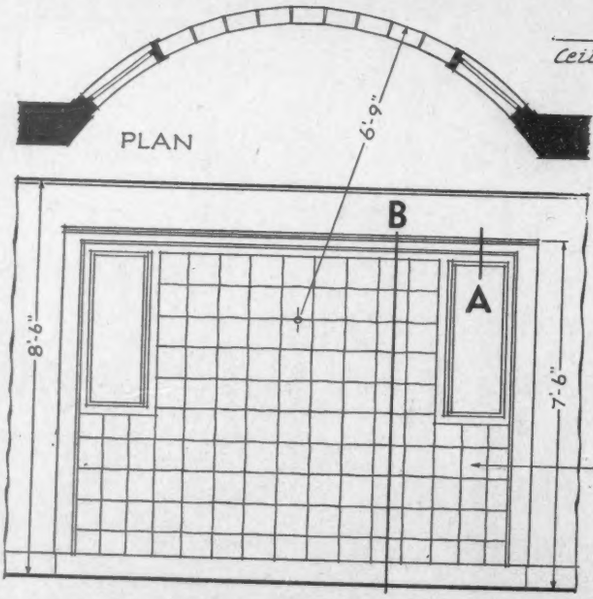


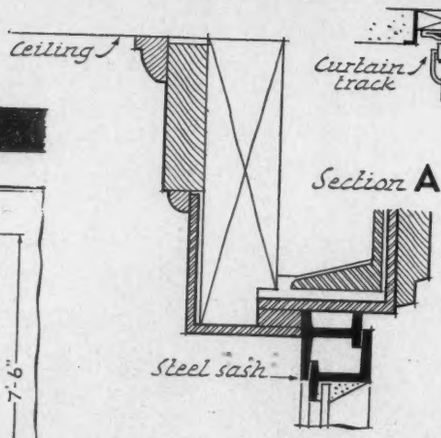
PLAN of WINDOW 1/4" scale

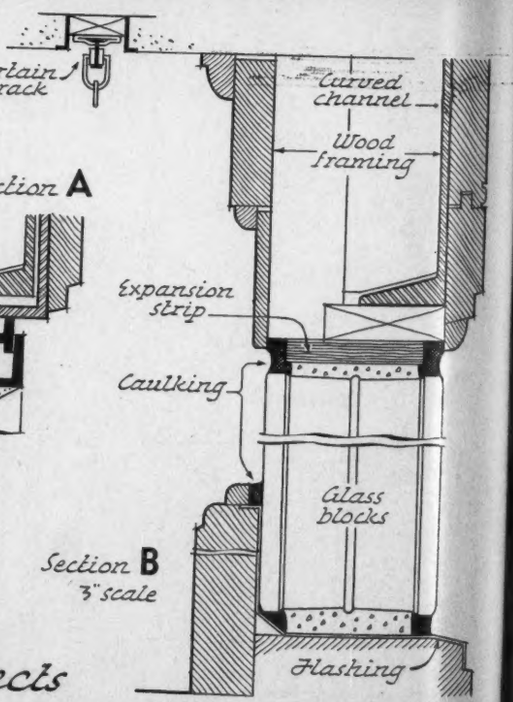


JOHN EKIN DINWIDDIE . . . . . *Architect*

WILLIAM M. BITTASE

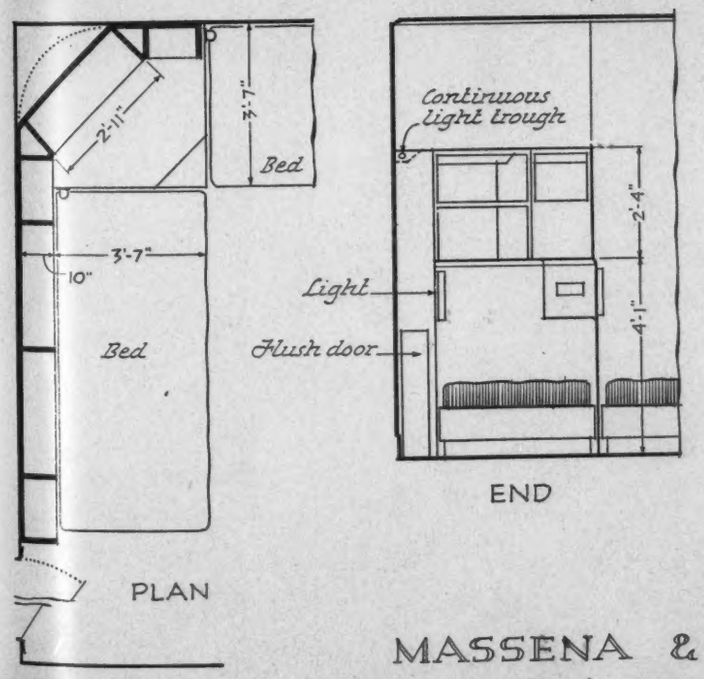






MASSENA & DU PONT. . . . . *Architects*

WILLIAM M. RITTASE



PLAN

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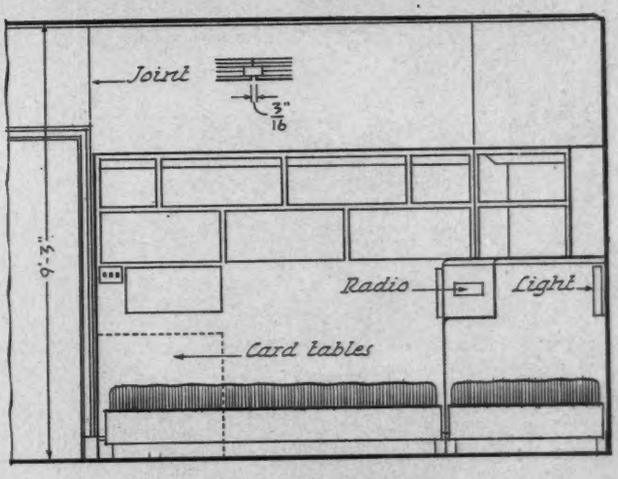

SIDE ELEVATION 1/4" scale

MASSENA & DUPONT . . . . . *Architects*

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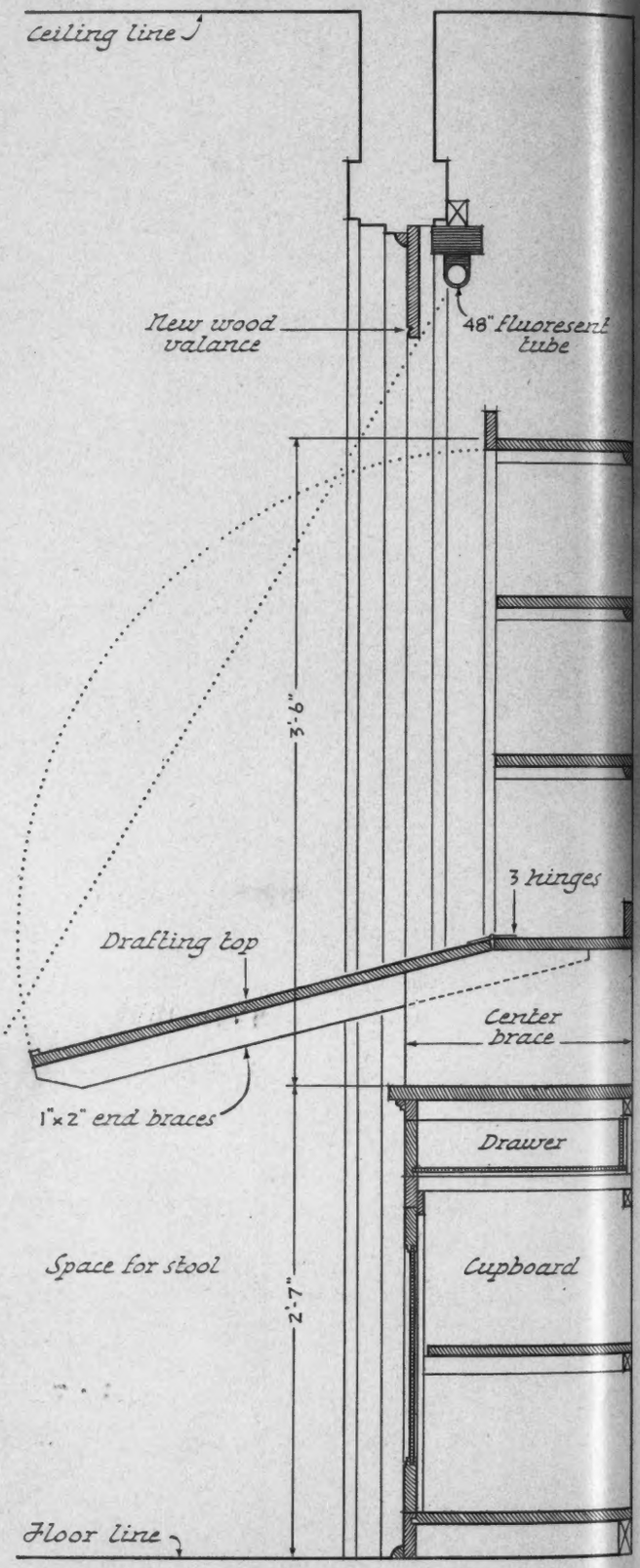
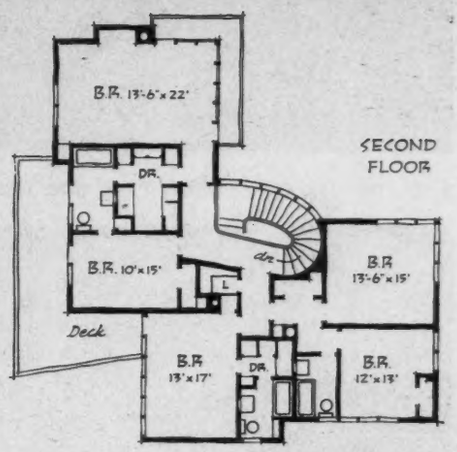
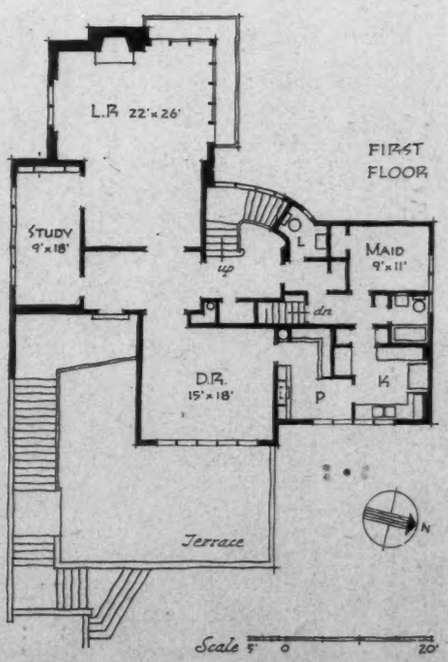


SECTION through CENTER
Scale 1"=1'-0" approx.

Designed by ALBERT W. SPITZ





FOR ONE OF THE STEEP HILLSIDES THAT SAN FRANCISCANS SO FAVOR AS HOME SITES, THE RESIDENCE SHOWN HERE WAS DESIGNED BY GARDNER A. DAILEY. THE PAVED AREA EXTENDING FROM THE STREET TO THE HOUSE ON THE EAST SIDE SERVES BOTH FOR ENTRANCE AND AS A MOTOR COURT. THE TERRACE PERMITS GREENERY IN THE SMALL DOORYARD. THE EXTERIOR IS PAINTED A WARM GRAY, WITH WOOD TRIM A HARMONIZING CREAM. THE DARKER COLORS, MINIMIZING GLARE, ARE PREFERRED BY DAILEY AS "PARTICULARLY RESTFUL IN CALIFORNIA SUNLIGHT." THE HOUSE WAS PHOTOGRAPHED BY ROGER STURTEVANT, SAN FRANCISCO

CITY HOUSE—GARDNER A. DAILEY, ARCHITECT, SAN FRANCISCO

THE LIVING ROOM, LOCATED ON THE WEST SIDE, IS SPACIOUS AND LIGHTED FROM THREE DIRECTIONS

THE STUDY IS ADJACENT TO THE LIVING ROOM AND ITS WINDOWS COMMAND A VIEW OF THE GARDEN. BOTH ROOMS AND THE HALLS ON THE FIRST FLOOR ARE PAINTED CINNAMON BROWN WITH BEIGE TRIM. THE DINING ROOM, ON THE EAST SIDE, IS PAINTED YELLOW-GREEN, CONTRASTING DRAMATICALLY WITH THE OTHER PRINCIPAL ROOMS. THIS RESIDENCE SUGGESTS LEISURELY LIVING AND APPRECIATION OF REFINEMENT IN DESIGN, CHARACTERISTIC OF DAILEY'S TALENT FOR CREATING DISTINGUISHED AND CHARMING HOMES

LIVING ROOM AND DINING ROOM DOORS ARE ON AXIS, OFFERING A VISTA. NOTE VIEW FROM LIVING ROOM

THE STAIR HALL IS PAINTED CINNAMON BROWN, ACCENTUATING LIGHT OF THE LARGE TRANSLUCENT WINDOW

THE SECOND FLOOR OF THE HOUSE IS ARRANGED TO PROVIDE A MASTER SUITE OF TWO ROOMS CONNECTED BY DRESSING ROOM AND BATH; A GUEST ROOM WITH PRIVATE BATH; AND TWO SMALLER BEDROOMS ADJACENT TO A THIRD BATHROOM. SOME OF THE BEDROOMS ARE PAINTED GRAY-BLUE AND SOME ARE DECORATED IN BEIGE AND HARMONIZING SHADES. INTERESTING DETAIL OF ONE OF THE BEDROOMS IS THE DESIGN OF TWIN BEDS ON ROLLING PLATFORMS PIVOTED AT CORNER OF A HANDSOME BUILT-IN CASE FOR STORAGE

AT ONCE DELIGHTFUL AND THOROUGHLY PRACTICAL IN THE SAN FRANCISCO CLIMATE ARE THE BALCONIES PROVIDED OUTSIDE THE LARGE WINDOWS OF THE LIVING ROOM (SEE ALSO PHOTO AT BOTTOM OF PAGE 773) AND THE MASTER BEDROOM. THE WINDOW OF THE STAIR HALL MAY BE SEEN AT THE LEFT IN THE PHOTOGRAPH ON THIS PAGE. BENEATH IT, THE WINDOWS OF THE HALL LAVATORY AND AT A LOWER LEVEL A WINDOW LIGHTING THE SERVICE AREA ADJACENT TO THE GARAGE (SEE EXTERIOR PHOTO ON PAGE 771)

CITY HOUSE—GARDNER A. DAILEY, ARCHITECT, SAN FRANCISCO

TEXTBOOKS AND ACTUALITY

BY SERGE CHERMAYEFF

Elsewhere in this issue appears our necessarily brief review of "Civil Air Defense," one of the many books on ARP which have recently been published. However, the very comprehensive uses of this book by Colonel Prentiss as well as the great detail in which certain measures of ARP are presented make this book interesting for a more detailed examination.

Any work on civilian air defense is required to embrace two mutually complementary objectives. *First,* to establish a philosophy of civil defense and *second,* to outline machinery of organization and technique which follow logically the basic premises and which would make them work. To be successful, such a work published at this time in the United States should take full advantage of all available data. Such a review of data would cover all that has actually *happened* as well as those measures which have been *advocated* by official spokesmen in their published recommendations.

Some of the technical recommendations which Colonel Prentiss puts forward have become obsolete in the course of actual experience. There is inevitably a considerable time lag between field observation of the effectiveness of civil defense and the publication of any text book. As in all technical questions arising out of war the effectiveness of instruments of defense never quite catches up with instruments of attack in an inventive world of technology.

Without wishing in any way to detract from Colonel Prentiss's work, it seems important to draw attention to any glimpse of recent case history, such as is provided by a small pamphlet, "Better Shelters," published by the Association of Architects, Surveyors, and Technical Assistants in London. The points made are specifically in connection with shelters. Colonel Prentiss's book covers a much broader field but the issues are not irrelevant to a general examination. Such points as are made by the A.A.S.T.A. appear important at this stage for the purposes of the American reader inasmuch as they question, as a result of first hand war experience, the basic validity of certain civilian air defense measures which Colonel Prentiss appears to advocate.

When Colonel Prentiss describes the policy of protection of the British Government as "reasonable" he thereby postulates the basis of his technical instructions. This reasonableness, however, still appears open to question and remains to this day a subject for difference, both on principle and detail, in Britain itself. The little pamphlet I have mentioned serves as an example. The authors have been working for the last four years in close collaboration with Professor Haldane, whom Colonel Prentiss quotes in one instance.

This is what they say on shelters in target areas, which happens to be the special subject matter of this pamphlet: "The Government's policy on the provision of shelters is explicit. It is that shelters should only be provided to the extent that is necessary to prevent demoralization of the population and impairment of effort. In putting forward proposals which attach importance to *the saving of as many lives as possible* we believe that we are suggesting something which is fundamentally different from official policy." They go on to say: "But we believe that this is the only policy which will satisfy public opinion and ensure the maintenance of morale. It has been constantly impressed upon the public that every country engaged in war becomes a fortress, that everyone is now in the front line . . . under these conditions the less cynical and humane policy of building bombproof shelters is the only one that will gain the confidence of the people." The pamphlet goes on to dispose of various arguments against the construction of heavily-protected shelters as baseless and disproved by example, and goes on to demonstrate that this official policy has resulted in an insufficiency and inefficiency of shelters, and from there proceeds to outline proposals based on the provision of *adequate shelters for everyone in dangerous areas.*

Their carefully considered proposals cannot be dismissed on grounds of economy, shortage of materials and labor, etc., which have been put forward. They recommend that: communal shelters be built rather than small, individual, scattered shelters; the number of people accommodated be determined by the distance from a shelter and the warning period; this period should be calculated and announced by the Government for every district; every shelter should be fully equipped because the maintenance of morale during air raids depends to a very large extent on the design and equipment of shelters.

What appears to hold good in the light of actual experience and to be diametrically opposed to official policy in connection with shelters, may hold good in many other instances. That Colonel Prentiss is not in entire agreement with certain premises upon which British measures are actually based becomes apparent in his section devoted to gas.

The emphasis he places on the potentialities of gas attack and his obviously profound knowledge of this subject make the list of gas protection measures elsewhere in the book appear completely inadequate. What Colonel Prentiss

suggests in his treatment of gas, (and he gives more space to this subject than I have seen in any other comparable publication), suggests forms of gas attack which, if employed, would render the protection so far advocated ridiculously inadequate.

Nowhere, however, does the author make it clear that the technical data he gives do not necessarily agree with his own findings. A reader merely looking for an immediate rule-of-thumb solution may be satisfied: but those who will want more than this may find themselves either missing something entirely, or getting only a confused picture precisely of those points on which the author can throw the most light. That the author has a far more important contribution to make than the provision of rule-of-thumb stuff becomes again apparent in other parts of the book.

When Colonel Prentiss, for instance, calls attention to the very large number of multi-storied framed structures relatively immune from air attack, which exist in urban communities in the States, he suggests a line of research for a technique of protection specifically American, for which there are no European precedents. Unfortunately, he does not develop the theme. In the case of both gas protection and construction of shelters in existing buildings Colonel Prentiss suggests lines of research which might lead to radical and basic variations in both policy and practice for civil defense as it might be formulated here.

In another section the deep dug-out shelter, a form practically unknown in England, is discussed at some length and opens up a line of inquiry not pursued very far to date, except in Spain.

The section on protection of industrial plants is among the most complete in the book, particularly in connection with organizational and personnel problems. The possible structural protection in industry still remains perhaps the richest field for research. One can only hope that the interesting work done in some defense plants here in the U. S. will be made available in the form of detailed technical information to *bona fide* designers. So far all we have had are tantalizing glimpses in the Technical Press.

The different possibilities for confining the effect of bombs within the smallest possible areas within vast industrial one-room buildings is a subject which has hardly been tackled. The reliance on inert mass to withstand splinter and blast, such as concrete and brick walls, sandbags, etc., seems too primitive. Curtains of mesh sufficient to intercept splinters and dispel the direct effect of blast and suction by reaction to them suggest themselves.

In his brief survey of the history of air war Colonel Prentiss reveals a scientific objectivity which makes the technical information forming the bulk of the book so complete. He accepts the arrival of the last and most effective instrument of war without the scepticism and reservations which distinguished so many of his professional contemporaries in Europe. In reading this part his objectivity appears as unconscious irony in certain places. One cannot help wondering why he records, without comment, the Hague air warfare rules of 1923 while entirely omitting the record of air war in Abyssinia, China, Spain, and elsewhere. A record of "total" war as a concept, made possible by air power, reveals such naively "sporting" gestures as the Hague rules to be no more than glimpses of a futile world long dead.

Equally I feel uneasy when reading the concluding parts of Colonel Prentiss's book:

"The necessity for bomb-proofing, fire-proofing, and gas-proofing of all buildings and utilities, from the city to the humblest home will bring about a complete revolution in the conventional principles of engineering, design, and construction." One has to reluctantly agree that this is probably true in the face of world events, and that we shall have war techniques and legislation as an added burden to be borne by housing everywhere. All efforts to provide a better environment, which is already hampered by so many handicaps, will have this additional handicap to deal with. The author's next comment is even more depressing to planners, architects, and designers. He goes on to say: "More far-reaching than the design and construction of buildings will be the changes necessary in city planning in the future. The first step will be to remove essential industrial plants and vital public service utilities from the cities and to disperse them at safe distances in the rural areas outside the areas they serve.

"The net result would be to reverse the trend towards the building up of large urban centers which started in the 19th Century by the industrial revolution. The tremendous development of motor transportation during the past three decades has already made the congestion of population in large cities unnecessary, and it is now no longer essential to locate factories and cities in order to be near the labor market. With the imperative necessity of removing large industries from the large cities, brought about by the danger of air attack to the whole surrounding population, we may expect to see an increasing trend towards the decentralization of industries to rural areas and small communities."

What Colonel Prentiss does not mention is that the very force which produced these undesirable characteristics in our planning have also been responsible for the abuse of our conquest of the air. As long as we do not take those measures which he advocates for better reasons than those of war, or imply in those measures a philosophy which cannot accept warfare with the calm professionalism of Colonel Prentiss, we shall have solved nothing. A process of decentralization on the grounds that Colonel Prentiss states would become ineffective just as soon as new weapons were devised to deal with the situation and in some not too distant future one might find one's self reading an equally impeccable textbook about weapons as yet not invented.

From the unequivocal *will* of the first quotation, the one thing about which the author has no doubts, is made clear: *Wars are inevitable.* Writing as a contemporary, objective, military scientist, he does not shrink from far-reaching, unfamiliar implications of his science.

Architects, through the very nature of their calling cannot be pessimistic about the destiny of our race. As long as we can see some of the changes in planning, mentioned by Colonel Prentiss as bettering the lot of humanity, we have better reasons for them. Reasons which might become even better if in a spirit of scientific objectivity, comparable to that of Colonel Prentiss, but directed toward other ends, architects are led to the conclusion that such changes must be made in the name of sanity and not of madness, and in the process eliminate precisely those premises upon which Colonel Prentiss has erected the doleful edifice of his conclusion.

See book review on page 10—ED.

WASHINGTON REPORT

COMPILED BY A. D. TAYLOR OF CLEVELAND

RECONSTRUCTION FINANCE CORPORATION

A major program of construction through the Defense Plants Corporation is continuing. The number of projects for which moneys have been loaned through the Defense Plants Corporation has practically doubled within the past three or four months. To the extent that services of the technical planning professions are required in the development of these projects, such employment is procured only through the officials of the industries to which the money is loaned.

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DEFENSE HOUSING

Additional funds under the Lanham Act are not yet available, and in all probability will not become available until the Congressional committees have reached definite conclusions as to the future procedure in the Housing Program, based upon investigations of the general housing problem. There seems to be some duplication of effort and lack of full coordination of activities among the agencies functioning in this work. It seems likely that the various agencies now administering different parts of the Defense Housing Program will be combined in one central agency, generally responsible for the program of planning and constructing Defense Housing.

A number of new projects for Defense Housing, as shown in the table on page 780, are being assigned to different government agencies. Sites are being selected for these projects and preparations are being made to proceed with the necessary planning as soon as funds are available.

For those who are specifically interested in procuring the latest and most complete information regarding Defense Housing Projects, reference should be made to the "Defense Housing Construction Bulletin" which provides information on the "Status of Projects under the Federal Works Administrator." Copies of this semi-monthly publication may be procured through the Director of Information, Federal Works Agency, North Interior Building, Washington.

A considerable quantity of Defense Housing is now being done through the Defense Homes Corporation, working in close conjunction with the Federal Housing Administration. Members of the technical planning professions in private practice are to some extent employed on these projects.

★

QMC OFFICES

A number of reports have been published in different local newspapers concerning the prospective development of Ordnance Projects in specific localities, but almost none of these projects have been officially announced.

Releases are published through the Office of the Chief of the Bureau of Public Relations of the War Department, located in the Munitions Building. It is through this office that information is immediately available to the public as soon as the project has been approved by the Office of the Secretary of War for design and construction. For those who are definitely interested in these projects, their names may be placed upon a mailing list to receive news releases of War Department activities and contracts.

At the time of writing of this report, legislation placing the construction activities of the Quartermaster General's Office under the Engineers Corps promises to be passed. The passage of such legislation will probably result in further reorganization in the Construction Division of the Quartermaster General's Office, in the Washington office and in the field.

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CCC ACTIVITIES

The work of the Civilian Conservation Corps is being greatly curtailed, with the result that many members of the technical planning professions, heretofore engaged in these activities, are seeking employment in other government agencies. It is quite likely that employment of members of the technical planning professions by this agency will continue to decrease until such time as the present emergency develops into a situation where an expanded program of public works requires this agency to again function at its former levels.

★

CIVIL SERVICE TESTS

The Civil Service Commission is now holding an "Open Continuous Examination," for *Estimators* and for *Specification Writers,* because of the shortage of personnel available through the Civil Service Roster for appointment to positions requiring this kind of knowledge. This examination will close on June 30, 1942, and is known as Examination No. U-69. This examination is a non-assembled examination which does not require any examination test other than have the applicant fill out in detail a questionnaire providing information as to his experience and qualifications in either of these specific fields of knowledge. Those who desire to take this examination should inquire at any post office for "Civil Service Form No. 8." For those who pass this examination there seems to be adequate opportunity for immediate employment. Under normal procedure the applicant who takes this examination would receive a rating and be placed upon the "Eligible List" within the period of one week if the examination is successfully passed.

The same kind of an examination as the one now open to architects and engineers in the field of Estimating, and Specification Writing is also open in the fields of "Heating and Ventilating," "Air Conditioning," and "Plumbing." Those architects and engineers who have a specialized knowledge and experience in these kinds of work and who desire employment should apply at an early date to take this examination.

POST WAR PUBLIC WORKS PROJECTS

Increased emphasis is being placed upon the program of preparing for the Public Works Program which will follow this emergency. The Federal Works Agency is taking a leading part in this preparatory work which promises to develop on a much more extensive scale, and on a far better organized basis than has heretofore existed. Much planning is being done by a large number of the active and forward looking Municipal, County, and State Agencies.

AIR CORPS ACTIVITIES

A tremendous expansion in the Army Air Corps is requiring increased personnel in problems of planning and construction of army and municipal air fields throughout the United States. If the present emergency continues, with the increased importance of this branch of the Army, there is a strong possibility that this branch of government activity will require the services of many more members of the technical planning professions than are now employed.

Nov. 18, 1941

(Editor's Note:—A Revised Procedure for Obtaining Coordinator's Designation as Defense Housing Under Regulation W of the Board of Governors of the Federal Reserve System may be had from the office of Charles F. Palmer, Coordinator of Defense Housing, Washington, D. C. Also available from his office is a revised list of Field Representatives of the Division of Defense Housing Coordination, and a Revised Listing of Defense Housing Areas).

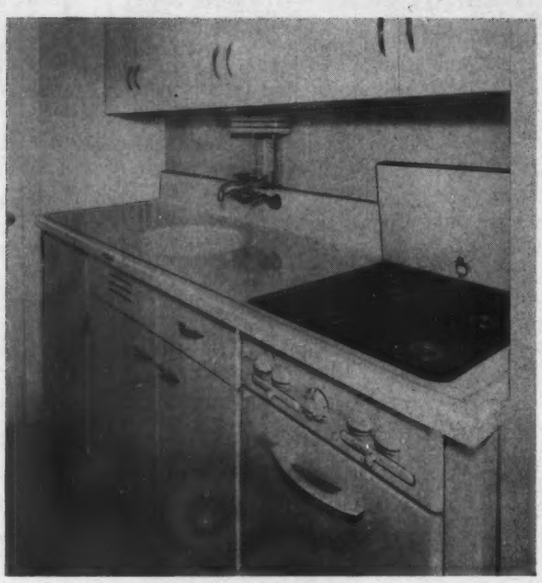
DEFENSE HOUSING

Location	*Construction Agency**	*No. of Units*	*Using Agency*
Muscle Shoals, Ala.	TVA	440	Defense Industry
Tuskegee, Ala.	OADH	30 P	Army Air Base
Campo, Calif.	OADH	30 P	Camp Lockett
Compton, Calif.	OADH	400	Defense Industry
Compton, Calif.	OADH	380	Defense Industry
Long Beach, Calif.	OADH	800	Defense Industry
Long Beach, Calif.	OADH	225	Ft. MacArthur
San Francisco, Calif.	OADH	40	Presidio
Wilmington, Calif.	OADH	430	Defense Industry
Wilmington, Calif.	OADH	250	Defense Industry
Bantam, Conn.	OADH	40	Defense Industry
New Haven, Conn.	OADH	300	Defense Industry
Atlanta, Georgia	USHA	180	Navy Aviation Base, Army Hosp.
Rockford, Ill.	USHA	350	Defense Industry
Elkton, Maryland	OADH	500	Defense Industry (includes 200 P)
Pittsfield, Mass.	OADH	100	Defense Industry
Springfield, Mass.	USHA	300	Defense Industry
Buffalo, New York	USHA	200	Defense Industry
Cheektowaga, New York	OAMO	1050	Defense Industry
Lackawanna, New York	USHA	200	Defense Industry
Niagara Falls, New York	USHA	450	Defense Industry
Tonawanda, New York	USHA	1200	Defense Industry
Astoria, Oregon	PBA	100	Naval Air Station
Portland, Oregon	OADH	400	Defense Industry
Bristol, Penna.	PBA	200	Defense Industry
Coatesville, Penna.	OAMO	400	Defense Industry
Jackson-Milan-Humboldt, Tenn.	OADH	200 P	Ordnance Plant
Freeport, Texas	PBA	200	Defense Industry
Orange, Texas	OAMO	900	Naval Const.
Pasadena, Texas	USHA	150	Defense Industry
Texarkana, Texas	USHA	400	Defense Industry
Newport News, Virginia	USHA	350	Defense Industry
Newport News, Virginia	NAVY	12	Mine Warfare School
Quantico, Virginia	OADH	250 P	Marine Base
Keyport, Wash.	OADH	300	Naval Torpedo Station
Seattle, Wash.	OADH	800	Defense Industry
Seattle, Wash.	USHA	250	Defense Industry
Seattle, Wash.	OADH	350	Defense Industry
Seattle, Wash.	OADH	100	Defense Industry
Tacoma, Wash.	PBA	400	Defense Industry
Morgantown, W. Va.	PBA	150	Defense Industry

**OADH—Office of Federal Works Administrator, Division of Defense Housing; OAMO—Office of Federal Works Administrator, Mutual Ownership Defense Housing Division; PBA—Public Buildings Administration; TVA—Tennessee Valley Authority; USHA—United States Housing Authority; NAVY—U. S. Navy.*

PENCIL POINTS DATA SHEETS

Prepared by DON GRAF, B.S., M.Arch.



DISREGARD OF THE OBVIOUS

You will no doubt be excited to learn that the Ninth Annual Convention of the *Institute of Cooking and Heating Appliance Manufacturers* was held at the Netherland Plaza Hotel in Cincinnati, Ohio, on December 3rd, 4th and 5th. In case you are a little hazy about this organization, it should be explained that its purpose is to promote cooperation and understanding between the members of the Cooking and Heating Appliance Manufacturers Industry.

A careful perusal of the program reveals no subjects for discussion which might possibly include the matter of functional design, nor the existence of any committee to "promote cooperation and understanding between stove

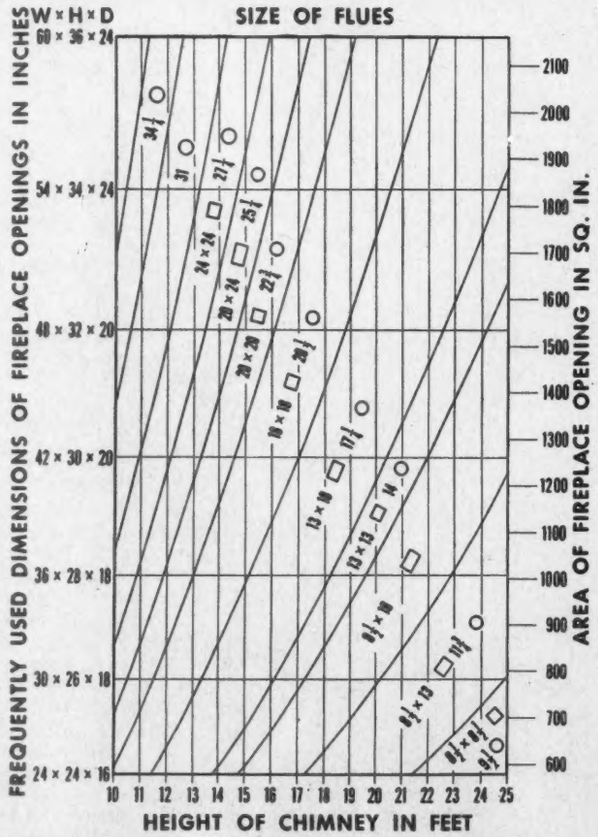
FIREPLACE FLUE SIZES

(*This Sheet Supersedes* E2b)

Index No. **E 2cc** MECHANICAL

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

SET 20 DEC 1941



The commonly used rules of thumb for proportioning fireplace flues are very inaccurate methods since the draft of a flue may be said to vary inversely as the square root of the height. If we take a chimney 25'-0" from the top of the fireplace opening to the top of the flue as being satisfactory, on the basis of flue area equal to 1/12th the opening area we can derive the following formula from which the above chart has been plotted:

$$\text{Flue area in sq. ins.} = \frac{.41 \times \text{opening width"} \times \text{opening height"}}{\sqrt{\text{chimney height'}}}$$

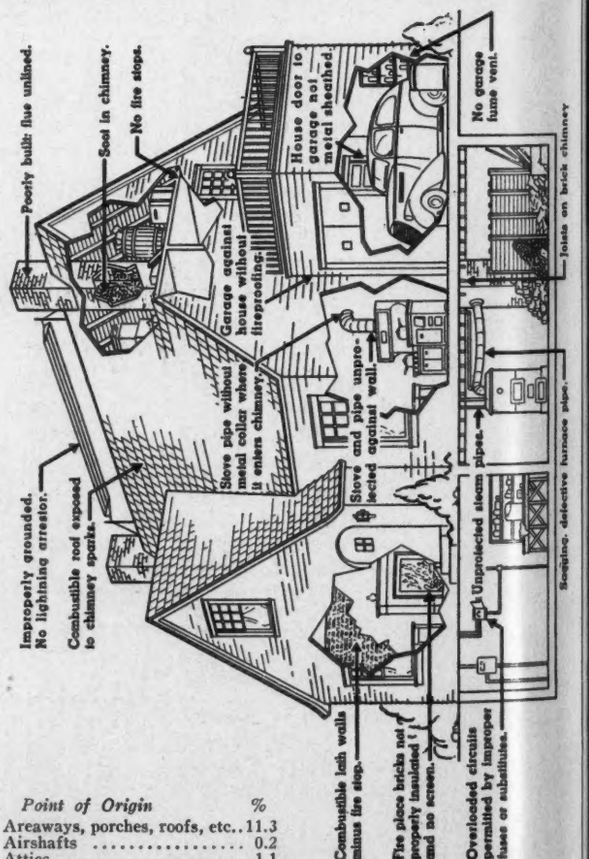
This chart should provide proper flue area for fireplaces having less than usual height.

ORIGIN OF FIRES IN RESIDENCES

Index No. **F 17** CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

SET 20 DEC 1941


Poorly built flue unlined.
Soot in chimney.
No fire stops.
House door to garage not metal sheathed.
No garage fume vent.
Joists on brick chimney
Garage against house without fireproofing.
Stove pipe without metal collar where it enters chimney.
Stove and pipe unprotected against wall.
Scraping, defective furnace pipe.
Improperly grounded. No lightning arrestor.
Combustible roof exposed to chimney sparks.
Unprotected steam pipes.
Combustible lath walls minus fire stop.
Fire place bricks not properly insulated and no screen.
Overloaded circuits permitted by improper fuses or substitutes.

Point of Origin	%
Areaways, porches, roofs, etc.	11.3
Airshafts	0.2
Attics	1.1
Awnings	2.7
Bathrooms and toilets	0.8
Bedrooms	10.1
Boiler and furnace rooms	2.2
Cellars	16.3
Chimney fires	2.3
Closets	4.2
Defective flues	5.3
Dining rooms	5.5
Dumbwaiter and elevator shafts	0.5
Hallways and corridors	2.5

Point of Origin	%
Kitchens	13.4
Parlors	7.5
Partitions, under floors, etc.	1.1
Storerooms	0.7
Stoves	10.5
Vacant floors	1.4
Miscellaneous	0.4

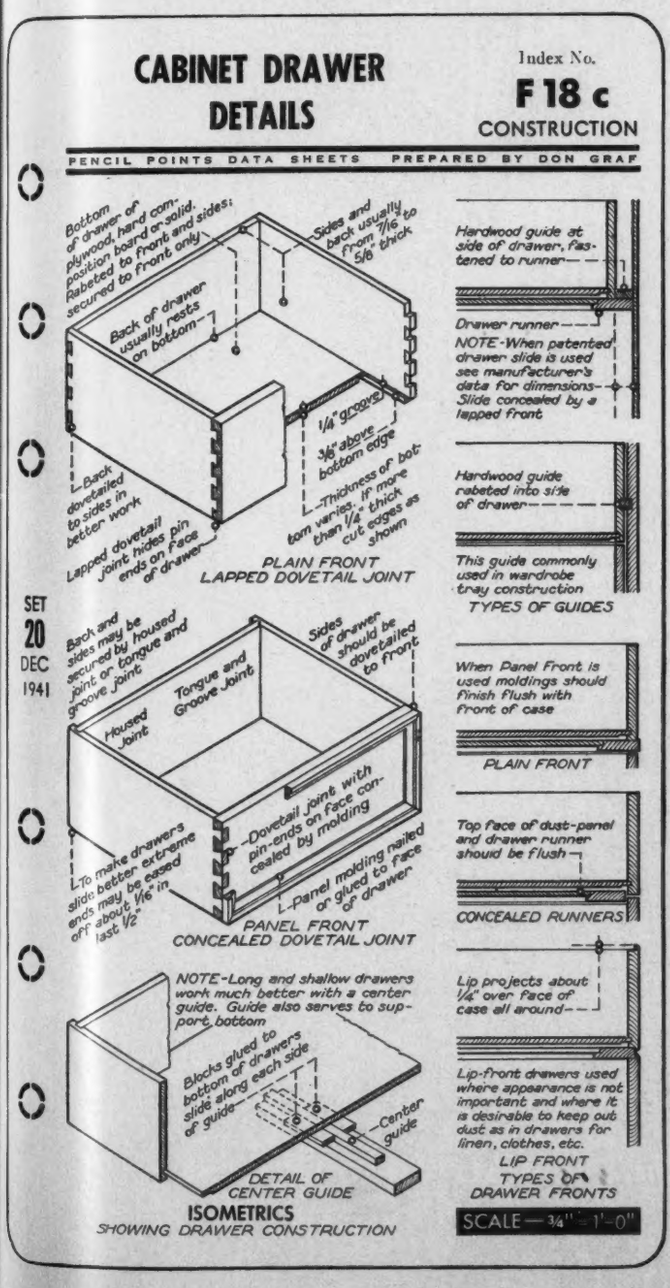
builders and *architects*," no buffet luncheon in honor of trends toward permanence in kitchen equipment installation, no reports condemning legs and round corners on stove tops.

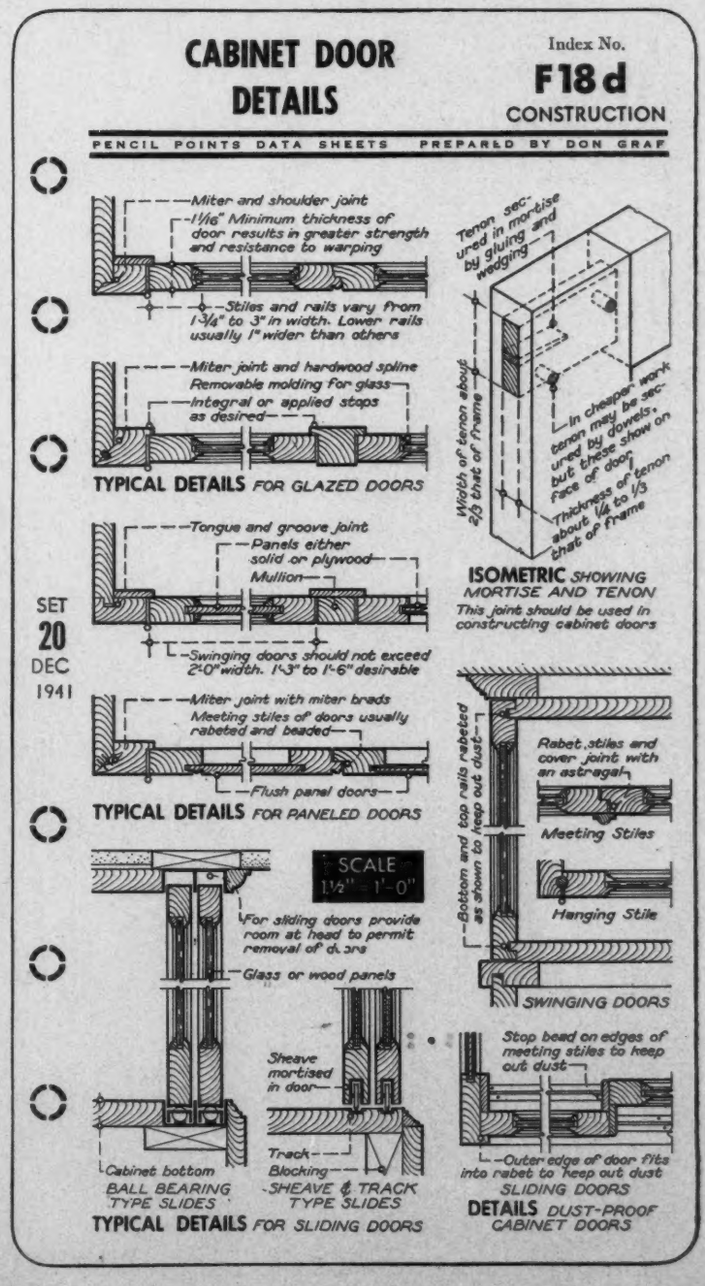
In October in this corner we complained about the designing of sinks, refrigerators and stoves as if they were temporary additions to the modern kitchen. Our squawk provoked sufficient number of replies to indicate that we are not alone. One reader writes:

"I heartily agree with your statement regarding the appearance of ranges and refrigerators. However, the idea of an integral unit containing a sink, cabinets, range and refrigerator has been developed and marketed." An illustration of the unit referred to is shown in the picture at the left. We take off our hat to the St. Charles Manufacturing Company for the development of a truly functional and beautiful piece of kitchen equipment. The left hand section of the floor cabinet is a refrigerator. In the foreground is a gas range. In the middle is a sink.—The whole thing is tied together with a continuous countertop to make a sanitary, permanent and convenient unit that did not just happen by itself.

The gushy ladies' magazines have printed hundreds of thousands of words and countless illustrations on kitchen design. In addition to the fact that they miss completely any semblance of efficiency in planning, they have never, so far as we know, in their superficial way, pointed out the most glaring obstacle to real kitchen sanitation. We see all kinds of drool about the chintz curtains over the sink, the gay little pepper shaker for the stove, lovely color schemes in shades of red and pale mauve with green accents, topped off with an illustration that looks like a jigsaw puzzle of cabinets, refrigerators, ranges, and sinks that don't go together.

Because of National Defense many items of kitchen equipment are not available. Just for the sake of argument, however, let us assume




CABINET DOOR DETAILS
Index No.
F 18 d
CONSTRUCTION
PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF
SET 20 DEC 1941
TYPICAL DETAILS FOR GLAZED DOORS
ISOMETRIC SHOWING MORTISE AND TENON
This joint should be used in constructing cabinet doors
TYPICAL DETAILS FOR PANELED DOORS
SCALE 1½" = 1'-0"
TYPICAL DETAILS FOR SLIDING DOORS
SWINGING DOORS
DETAILS DUST-PROOF CABINET DOORS

that everything shown in the catalogs are really obtainable. What does the market afford?

Heading the list is the unit shown on page 782, for kitchens using either gas or electricity.

The second manufacturer makes a unit in which the refrigerator and sink are integral but the gas range is an afterthought.

The third manufacturer makes units in which the sink and electric range are integral but for the ice box you have to buy one of these fat, round cake-icing affairs, and no gas cooking unit is available.

The fourth shows a more or less integral sink but the range and the ice box are of the traditionally movable design.

The fifth manufacturer has one unit with sink and refrigerator covered by a continuous counter-top and the electric range top made "built-in" with the addition of a dirt-collecting cover molding to mark the change in material from linoleum to enameled steel.

The sixth does the same thing with the gas range that the fifth one has done with the electric.

A seventh makes a sink and range unit but no refrigerator.

Now all these manufacturers are makers of cabinets. We have only praise for those companies who make counter-tops—of which a number of excellent types can be purchased. But what good does it do, to be able to buy a proper counter-top when a refrigerator, electric or gas stove cannot be found for installation in the cabinet work as a continuous whole?

Will somebody please get busy and manufacture gas stoves, electric stoves and refrigerators in different capacities for different sizes of kitchens so that they will fit the standard base cabinets 2′-0″ deep and 3′-0″ from the floor to the counter-top? Then and not till then can kitchen design be approached as the delightfully organized and integrated laboratory that the ladies' magazines have simpered about for these many years.

PUBLIC RELATIONS

A FORUM EDITED BY D. KNICKERBACKER BOYD

As the first year of the life of this section draws to a close it seems fitting that those interested in Public Relations activities should be furnished with an index for easy reference to what has appeared in past months. Such an index has been prepared and is available in the form of mimeographed sheets, which will be mailed upon request to anyone who can make use of the information. It was considered best to do this rather than to print it here, since it would have occupied all our space for this month and prevented the inclusion of additional helpful suggestions. The index should be valuable also as a check list of the many activities that can be undertaken either by interested individual architects or by such groups as A.I.A. Chapters, local societies, or State associations through committees.

Public Relations activities are particularly important and feasible at a period like this, when some architects find their practice temporarily curtailed and have time on their hands to take part in making contacts and carrying on public education among local government officials and the citizenry in general.

In thanking all readers and contributors for their valuable cooperation during the past year and in inviting a continuance of their interest for the future, this section extends most cordial best wishes for the Christmas season and for a healthy, happy, and prosperous New Year.

D. KNICKERBACKER BOYD
No. 4 So. 15th St., Philadelphia, Pa.

EXHIBITS & EXHIBITIONS

(7) The present public interest in things that have to do with Defense affords a good opportunity for architectural groups to put themselves in the public eye. A case in point is the exhibit presented by the State Association of California Architects, Northern Section, at the California State Fair in Sacramento last September. This show was developed in collaboration with the O.E.M. and the California State Council of Defense. We quote from the letter of Phil Soljak, Public Relations representative for the Association.

"As the exhibit was the first of its kind in the country and was for only ten days, we had quite a few problems. We solved these by erecting a kind of wood shed or deck in an excavation 30 ft. long, 12 ft. wide, and 3 ft. 6 in. deep, lining it with corrugated steel and covering the whole with earth and sandbags. It looked quite like the real thing, especially when gas masks, tin hats, British civil defense posters, fire and first-aid equipment, etc. were added. We also borrowed sound equipment and gave the crowd a thrill with air raid sound effects.

"I believe we broke the record for an architectural exhibit. A total of 175,000 people, 23% of the total attendance at the Fair, inspected the exhibit during the eight days of its presentation. Federal, State, and Army Air Corps officials were greatly interested and have asked us to repeat the show in other California cities. In case we do this we would utilize more substantial materials such as interlocking brick, following the present trend in British air raid shelter construction."

The accompanying photograph shows the exhibit as it appeared, with Mrs. Soljak standing very smartly at attention in front of it.

UNIFICATION AND P.R.

The following statement by Lewis G. Adams, Chairman of the Committee on Unification of the New York Chapter, A.I.A., has a direct bearing on Public Relations activities. Manifestly, better and closer organization among architects should be an accompaniment, if not indeed a prelude, to more active and effective public education. There are a number of metropolitan communities other than New York which are confronted with a similar situation. The soon-

er the job of pulling the many separate groups together into closely knit organizations is tackled, the better. Says Mr. Adams:—

"The picture found in most communities at present is one of utter confusion as regards the architects' own house. For example, the New York Metropolitan Area, with a total of approximately 2548 registered architects, boasts three distinct AIA Chapters with a total membership of about 516, seven architectural societies with a total membership of about 620, the *Architectural League,* the *Beaux-Arts Institute of Design,* the *Municipal Art Society* and many others allied to architecture.

"To complicate matters more, there are the Registered Architects of the state, numbering about 3535, of which between 60% and 70% *do not belong to any architectural organization.* A questionnaire recently sent to members of this group with addresses in the Metropolitan Area reveals that 70% of the 24% replying would be glad to join a single strong architectural organization in the Metropolitan Area, that an additional 5% might join and only 5% said they were not interested. 5% of the group questioned had retired from practice or gone into other fields and 15% were members of architectural organizations in neighboring states or were erroneously sent questionnaires. However, a large majority of this group said they would join such an organization.

"If there were no existing organizations, what would be the ideal set up so that the architects in a given district could have (1) close association with each other; (2) a well directed public relations program which includes selling the profession to the public; (3) active interest in local, state, and national legislation as it affects architects; (4) an active campaign to put the planning of public buildings in the hands of private architects; (5) periodic bulletins on matters of vital interest to the profession; (6) encouraging and stimulating architectural education; (7) maintenance of the ethics of the profession; and (8) the return of the practice of architecture to architects?

"*First*—all registered architects should be eligible for membership in a single organization in a given locality. *Second*—each group should be connected to a State organization for purposes of showing a united front to the State Legislature, and each State organization should be connected to a National one for purposes of showing a united front to Congress. All members should have equal rights and dues should be based in general on ability to pay. A full time salaried director should be employed for each group and each group should have permanent headquarters. Dues must be low enough so that all architects and draftsmen can join and yet large enough to yield adequate funds.

"The natural nucleus for such an organization is the AIA."

NEWSPAPERS

(4) New York Times Magazine in its edition of Sunday, October 19th, presented a double-page spread featuring views of six houses designed by architects for themselves. The pages are reproduced in miniature at the bottom of this page. The six architects represented were Robert I. Powell, William F. Dominick, Kenneth Kassler, Walter Gropius, William Lescaze, and Frank Lloyd Wright. A statement by each architect telling the whys and wherefores of his design accompanied the picture and the editor in a note called the whole collection to the attention of "All people who are struggling to reconcile their dream houses with their pocketbooks and get the results in the blueprint stage before next spring."

The feature was initiated by the Times editors and reflects their recognition of the perpetual interest of the public in house design. It suggests the possibility that it is not necessary to wait until a newspaper invites material of the sort. An alert Public Relations committee should be in touch with all such opportunities and should initiate ideas for such features.

WHY NOT UNION NOW?

A PROPOSAL FOR THE PLANNING PROFESSIONS

BY ELLIS F. LAWRENCE

William Orr Ludlow, member of Committee on Public Information, A.I.A., in his recent article in *The Octagon*, "Are Architects Slipping?", challenges the profession to action. He quotes, "The profession is held in low esteem by the public. The public has not much use for architects because it thinks they are just fellows who draw pretty pictures." He says, "Many don't see what they can do, especially under war conditions, when the public is little interested in architects because the government is doing most of the building."

But people *are* interested in defense—in wastage of the taxpayers' money—in interference with individual enterprise, and with inadequate foresight in planning the vast program which the government is undertaking. *The profession is doing too little to convince the public and its government of the value of its services in this emergency.* Mr. Ludlow ends his article with—"If we want individually to take our part when there is so much dire need, we have got to make use of every opportunity to gain and to hold the respect and confidence of the public by public service."

The writer here offers a program by which the "Public Information" suggested by Mr. Ludlow as a need, may have a maximum of force and perhaps gain, through united efforts, the privilege of serving the government to the limit of our abilities as a profession of planners, and not "picture makers."

In the same issue of *The Octagon* appears the informative article on "Planning for Civilian Defense" by Harvey Stevenson, President of the New York Chapter, A.I.A. We can, if we will, profit much by the experience of the profession in England which he gives us. As he says, our Government began by imitating the cart-before-the-horse method England adopted until October 1940 when a "proper Ministry of Works and Buildings was finally created and private architects found a field of real service therefrom."

We already have a shortage of trained technicians in certain fields, as England had, and yet the draft boards continue to take our senior students in architecture for the Army, regardless of temperament and training, leading some of us to the conclusion that the draft is not as selective as we had hoped.

We note, also, that "the British government is encouraging and even allowing priorities for desirable private, municipal, and semi-public construction and reconditioning. Most of all it is undertaking long-range planning of the broadest scope. They feel, as we should feel already, that an emergency must not be allowed to breed conditions as bad as or worse than they were before."

Mr. Stevenson ends his article with the following:

"It would be ingenuous in the extreme to assume that *all creative artists* could be molded at once into a united front for their mutual good, but I believe that the trend of the times demands the most intense efforts in that direction. It does not seem to make sense that those who create the machinery for a product should have one set of principles, those who design the plant another, those who try to provide, if anyone does, for the physical needs of the workers a third, and so on. Until such time as it is realized that all those people who use vision and imagination in a creative effort, making better things for human use, can join together to protect and strengthen their crea tive ideals, they will never attain a position commensurate with their efforts."

Here is suggested that collaboration which we must have if the natural emergency is to be solved and post-war days are not to be disastrous. Here is a picture of the planners—"joining together to protect and strengthen their creative ideals"—for the cause of humanity.

But Mr. Stevenson calls the planners "creative artists"! For popular consumption, perhaps it might have better been "creative engineers." One local OPM director has warned that beauty can expect no place in priorities these days and more than one critic has stated that the great architecture of the day is done by engineers.

The writer, in the past, has pleaded for the creative approach. To him architecture is engineering plus beauty. But he has lived long enough to know the architect, as such, has no monopoly on beauty or the comprehensive art and science of planning. He knows engineers, social workers, home economists – yes – and bankers that are planners and good planners,

as well as the architects and landscapers. If we are not cultists, we must admit that good site planners, good housing experts, good city planners may come from training and experience in any of the above fields. We should, by this time, know architecture itself is a collaborative social function in which the architect can well be the coordinator and designer.

Therefore, is it not time to bring the planners of the country together in the common undertaking, knowing that "In Union There Is Strength?"

The engineer does, just now, have more popular appeal than does the architect and his opportunities are relatively greater. However, one branch of the government, for reasons best known to itself, uses the Architect-Engineer private practitioners to do much of its work. Is it not significant, this new use of the term Architect-Engineer? Perhaps it might be well to capitalize on this and to consider how, if the strength of the planners were enough, it might be sold to all other governmental agencies to use the Architect-Engineer. To qualify, the practitioner would have to organize a group of associates including experts in the lines in which he did not quality—but why not? We know no man can master all phases of the planning problem.

Perhaps there are landscape architects, or housing experts, or city planners who would deny they were architects or engineers—were in fact a new breed of planners—but if such there be, they are few in number. Even to these it should be apparent that they are too weak to push off the stage those other planners —the engineers and architects.

The first step at this time, it appears to the writer, is for all planners to form an alliance, strong enough in finance and numbers to make their message heard by the public, industry, and especially by government, in both the executive and legislative branches.

As Mr. Stevenson writes in his *Octagon* article: "In summary, then, policies must be planned, projects must be planned, and the work must be planned, all with the full utilization and advantages of *all technical skills available.*"

The writer suggests, therefore, that a Federation of all planning groups be formed from which a National Council of Planners would be chosen to direct a campaign of publicity and education to sell the idea that industry, cities, housing, and governmental defense projects must be planned to avoid waste and to be efficient; and that we, the planners of the country, know and can prove the values to be offered by us in this national emergency. The big idea of planning must be the dominant note. The rivalries between the professions are hurting the cause.

What would the engineers think of such an approach? The writer believes from his experience that they would be friendly to it. The attitude of many engineers is shown in their attacks on the narrowness of their education. Professor Baldwin Woods of the University of California (Mechanical Engineer) writes in the August number of *Architect and Engineer,* "It is not mentioned often enough that engineering is first an art, and second a science." And, "There is often a hiatus between design and production because the designer doesn't know how the production man must make a thing. There should be a combination of emphasis on power of analysis and ability to do."

In the same magazine is an article on "Engineer Needs Greater Vision." Professor William S. Lynch, Head of the Department of Humanities, warned against entrusting power to men who, though technically skilled, are lacking in vision. He pleads for the humanities in engineering education, and warns that more and more the engineer will be called upon to operate the social controls, as well as machines. He says, "Industry had balked at the personnel material trained in the applied sciences."

In the article, Dr. Edwin S. Burdell, director of Cooper Union, is also quoted along much the same lines.

This shows at least a trend in the thinking of the engineers—the strongest unit among the planners of the country. Engineers, like the architects, are humbled these days. In few cases can either have the freedom necessary to deliver their maximum skill or serve as their knowledge and wisdom permits.

Already the national associations of Engineers and Architects and Landscapers have established friendly relations through conferences and association with governmental agencies. It seems reasonable, then, that this suggestion to form a more formal Alliance of Planners, might succeed in time to contribute much to society in the emergency and guide future destinies in the post-war period.

The writer suggests, therefore, that the American Institute of Architects take the initiative and invite the planning groups for a conference, to perfect plans for a "Union Now" of the planners of the country, where a National Council of Planners might represent strength sufficient to properly advance the cause of Planning in defense and post-war problems. This is no surrender of the prerogatives of any group involved. It strengthens every one of them for there is a place and a need for all.

Summarized Program

1. A Combined National Convention of Planning Groups, Architects—Engineers—Landscape Architects—City Planners—Housing Experts, to promulgate plans for a Federation of National Planning Societies represented by a National Council of Planners, and to consider mutual problems involving education, and general practice, but especially defense and government service.
2. Local meetings and conferences of the above groups in educational institutions and in local fields of practice.
3. Reciprocity between Registration Boards, that the use of the terms Architect-Engineer and Engineer-Architect may be legalized
   a. By engineering examinations for architects to meet standards acceptable to Engineering Registration Boards, and
   b. By examinations in planning and practice for engineers, to meet standards acceptable to Architectural Registration Boards.

RESUME OF AIR CONDITIONING

BY RONALD ALLWORK

To many in the building field, air conditioning is still a vague insinuation of a new era of living—a new discovery which bids fair to change the whole concept of architectural design. Actually, however, it is merely the coordination of certain objectives that have long been familiar, and though its use for human health and comfort is comparatively recent, to industrial engineers it is just another name for something they have applied to manufacturing processes for many years.

Unfortunately, when the term air conditioning first came into popular usage, it was applied rather loosely, and very often implied more than it could accomplish. Manufacturers' associations, realizing the ultimate effects of possible misconceptions, adopted regulations governing its use. Also the Federal Trade Commission found certain instances of misuse and took appropriate steps. Nevertheless the misunderstanding that developed in the first few years from claims and counter claims still contributes to such confusion as exists today.

In its broadest sense, air conditioning implies a control of any or all of the physical and chemical qualities of the air within a defined space. That this admits of almost unlimited possibilities is soon appreciated when it is realized that the scope of air conditioning application covers the industrial as well as the human comfort field. But to the layman and to the man in the building field who is so close to the layman's problems, air conditioning is more than often thought of in terms of human health and comfort. For this reason it should be defined more specifically as having four objectives, which involve the control of: (1) temperature, (2) humidity, (3) cleanliness, and (4) air movement within an enclosed space to produce a desired effect upon occupants or materials.

It is the purpose of this article to analyze these objectives and provide the reader with a procedure for appraising an air conditioning system rather than for its design. The discussion which follows is at best but a broad introduction to a complicated and scientific subject. Discarded theories, such as the one involving the effects of carbon dioxide, are omitted from mention, as are those new elements like ionization, which are not yet proven in application. Finally the reader will do well to remember that while the advances in the field of air conditioning have been great, the reproduction of an atmospheric condition as stimulating, healthful and comfortable as nature's ideal weather has not yet been achieved.

PHYSICAL PROPERTIES OF AIR

Because "air" *is* essentially the subject of this discussion it might be well to examine it briefly and to establish its characteristics. Ancient scientists called air an element—but today it is more properly known as a mixture of gases. More specifically it is made up of nitrogen, oxygen, argon, carbon dioxide and small amounts of hydrogen and other gases. Atmospheric air also contains water vapor, and while the proportion of the gases remain fairly constant, the amount of water vapor *does* vary. Because this variation is considerable, it plays an important role in air conditioning design.

TEMPERATURE AND HUMIDITY

Even the briefest reference to that trite phrase, "It's not the heat—it's the humidity" will serve to impress the reader that these two elements go hand in hand.

Heat, when considered from the standpoint of quantity, is known technically as specific heat. In terms of intensity, however, it is temperature—the subject of immediate interest.

When people talk about the temperature they are usually referring to *dry bulb temperature,* which is that measure of heat indicated by the common variety of thermometer. It is the kind of heat that is perceptible to the sense of touch and for that reason is called sensible heat. It is a heat which actually raises the temperature of the body that absorbs it.

But another kind of temperature is *wet bulb temperature.* This is the lowest temperature a water wetted body will attain when exposed to an air current and it is used as an indication of the percentage of moisture in the air. This temperature may be measured by means of a sling psychrometer—an ordinary thermometer whose mercury bulb is covered with a moistened mesh wick. Whirling this by means of a chain or a cord attached to one end causes the moisture to evaporate rapidly and the temperature to fall—the lowest reading attained being an indication of the wet bulb temperature. To better understand what has happened, consider for a moment what takes place in the making of steam, which involves the same phenomena. When water is raised to the boiling point (212°F), steam is produced only when sufficient additional heat is supplied to convert the water into vapor. The temperature of the water is not raised in the process, nor is the temperature of the vapor, the sensible heat having been converted into latent heat—a heat whose character is such that it consumes or spends heat without producing temperature.

In evaporating water below the boiling point, latent heat is also required, and in the case of the wet bulb thermometer it takes this heat from the remaining water. How much heat it takes depends on the dryness of the air and its temperature. Wet bulb temperature thus becomes the temperature at which the air would normally become saturated and is for all practical purposes a measure of the heat value of the air and, indirectly, an indication of humidity.

Humidity, although variable, does have certain limits. At a given temperature, atmospheric air is capable of holding water vapor in varying amounts up to a certain limit, called the saturation point, beyond which a precipitation of the moisture will take place.

Relative humidity is the amount of water vapor in a body of air at a given temperature expressed as a percentage of the total amount of moisture the air is capable of holding. Thus the saturation point represents a relative humidity of 100%. As the temperature rises, its capacity for holding water will increase; as the temperature falls, its capacity decreases. In other words, the temperature of saturated air can be raised to obtain any desired relative humidity, without changing the amount of water vapor content. Conversely, the temperature of warm air can be lowered to a point where saturation will eventually be reached. The temperature at which saturation occurs for a given moisture content is called the *dew point*—a lower temperature resulting in condensation.

AIR CLEANLINESS

Pure air, except as a product of the laboratory, does not exist and every cubic foot about the earth contains impurities of one sort or another. Particles of animal and vegetable matter, of earth, sand, ash, wood, metal and pollen pollute the air. Some of the particles, if they have come from larger pieces of material through breakage or by grinding off, or through disintegration, are known as dust. Other particles exist as fumes caused by condensation, or as smoke, which is made up of carbon particles resulting from incomplete combustion.

Not all of these impurities are objectionable—in fact without dust in some form life would cease. For instance, each rain drop is formed around a dust particle and it is dust that tempers the heat of the sun to make life possible. Yet many of the dust particles found in the air are a definite menace to health, and are a cause of suffering, disease and death.

Impurities in the air are measured in terms of the micron—a unit equal to approximately 1/25000 of an inch. A particle 50 microns in diameter is about the smallest particle that is visible to the unaided eye. Particles as large as this, unless sustained by violent air motion, quickly settle out. Those less than 10 microns in diameter usually remain in suspension, unless removed by artificial methods, and since common bacteria come within this classification, it is evident that air pollution becomes an important problem.

The measurement of the quantity or density of these particles in a given body of air may be accomplished in several ways. One method is to impinge the air on a viscous coated surface, and weigh the particles thus collected. Another brings about the collection of particles by electric precipitation. Microscopic count of the particles collected by impingement in water is commonly used—as is the method of collecting samples in a porous crucible whose weight increase provides the analysis of content.

AIR MOVEMENT

Upon air movement depend such phenomena as evaporation and convection, and it is this function which brings about uniformity of temperature, humidity, and cleanliness. In the form of ventilation it becomes the process by which air is supplied or removed, and though it does not imply air quality, it is the action by which quality is accomplished.

Air movement may be induced by natural forces, commonly called gravity, or by mechanical means, such as a fan or blower. Gravity action depends upon a temperature differential and upon the presence of a localized source of heat or cold. Since air is a mixture of gases which expand with a temperature rise, warm air is forced upward by the weight of the cooler air which seeks to displace it. However, in a confined space, if a local source of heat (or cold) such as a radiator is not in evidence, the air will stratify—the warmest layers being at the top and the coldest being near the floor. This is an important consideration in air conditioning design.

There are a number of instruments currently used for the measurement of air movement. The Pitot tube is used to determine the velocity pressure in confined spaces, such as ducts. The Katathermometer is used principally in free spaces to detect drafts, air currents, and stagnant areas. Anemometers, of which there are several types, also measure the velocity of moving air. "Air changes," a term in common use, refers to the complete renewal of the volume of air within an enclosed space during a stated period of time.

THE REQUIREMENTS

Air conditioning may be divided into two general classifications: COMFORT AIR CONDITIONING and INDUSTRIAL AIR CONDITIONING. The latter, because it is used in connection with substances of established reactions and regulated quantities, does not offer so complex a problem as the former which deals with human beings because the loads on equipment remain fairly constant. Furthermore, such factors as noise, space limitations, etc. are relatively unimportant. Comfort conditioning, on the other hand, is complicated from every angle. Involving the psychological as well as the physiological reaction of humans, it becomes immediately difficult. Not only is it hard to find two people who agree on what kind of air makes them feel comfortable (because health, age, sex, and habits are all factors which affect the reactions) but in addition to this, due to its use in public places, air conditioning for comfort must be designed for a fluctuating load. It must recognize sound as a factor and provide for its control. Finally, it usually

becomes necessary to house bulky equipment and distributing systems in a structure where space is expensive, where appearance is paramount.

INDUSTRIAL CONDITIONING

Although industrial air conditioning is comparatively simple in application, the determination of its requirements is an involved study, almost unlimited in scope. Figure 1. tabulate some of the requirements of the various manufacturing processes. It must be remembered that these at best are but an indication of a need—that a thorough understanding of the problem of the manufacturing process involved is of utmost importance to the proper application of air conditioning.

All the elements of air conditioning may not be needed for a manufacturing process, but usually—in varying degrees—temperature and humidity play the leading roles. Generally a relative humidity of 40% is considered dry, above 80% damp. When dry, materials are more brittle and there is a prevalence of static electricity. When damp, they are soft and pliable. Some materials are processed under humid conditions in order that they may retain their moisture—bread baking is one of these. Others, such as electrical insulation, are processed under the dryest conditions practical. Finally the optimum conditions for a particular manufacturing process may be so extreme as to prove detrimental to the health or efficiency of the workers connected with it. In such an instance, considerations of health come first, while production efficiency and product processing are a matter to compromise.

FIGURE 1

TABLE OF USUAL AIR CONDITIONING CHARACTERISTICS FOR VARIOUS TYPES OF BUILDINGS

	TYPICAL INSTALLATIONS	AUTOMATIC CONTROL of TEMP.	AUTOMATIC CONTROL of HUMIDITY	AUTOMATIC CONTROL of VENTIL'N	ELIMINATION of ODORS	CLEAN INCOMING AIR	QUIET OPERATION	FREE MOISTURE PERMIT'D	Customary TEMP. F.	Customary REL. HUMID.
FOOD INDUSTRIES	BAKERY– Dough Fermentation Proofing Bread Cooling	Important Important Essential	Important Important Important	Important Important Important	Immaterial Immaterial Immaterial	Essential Essential Essential	Immaterial Immaterial Immaterial	Yes Yes Yes	80° 90-95 70	80% 80-90 65-70
FOOD INDUSTRIES	PREPARED CEREALS–Packaging, Sealing	Important	Important	Desired	Desired	Essential	Immaterial	Rarely	75	40-45
FOOD INDUSTRIES	CONFECTIONS–Coating, Dipping, Hard Candy Cooling, Packing, Starch Room	Important	Important	Desired	Desired	Essential	Desired	No	60-80	40-55
FOOD INDUSTRIES	DAIRY PRODUCTS–Cheese Butter, But. Chill Room	Essential	Desired	Helpful	Desired	Essential	Immaterial	In cases	40-60	60
FOOD INDUSTRIES	MACARONI PRODUCTS	Essential	Important	Helpful	Immaterial	Essential	Immaterial	Not customary		
TEXTILE PROCESSING	COTTON–Card, Comb, Roving, Spin, Twist, Spool, Warp, Weave, Cloth Room	Helpful	Essential	Aids humidifying & evap. cooling	Immaterial	Not often a factor	Immaterial	Yes	75-85	50-80
TEXTILE PROCESSING	WOOLEN & WORSTED–Card, Comb, Spin, Weave	Helpful	Important	Aids humidifying & evap. cooling	Immaterial	Not often a factor	Immaterial	Yes	75-80	50-70
TEXTILE PROCESSING	SILK–Spin, Throw, Weave	Helpful	Essential	Aids humidifying & evap. cooling	Immaterial	Desired	Immaterial	In cases	75-85	55-65
TEXTILE PROCESSING	RAYON–Filament Mfr., Winding, Weaving	Essential Helpful	Essential Essential	Helpful Helpful	In cases Immaterial	Essential Desired	Immaterial Immaterial	No In cases	70-80	40-60
TEXTILE PROCESSING	FULL-FASHIONED HOSE	Essential	Essential	Helpful	Immaterial	Essential	Immaterial	Rarely	75-80	55-65
GENERAL INDUSTRIAL	TOBACCO–Softening, Stem, Strip, Cigar and Cigarette Making	Important	Essential	Important	Desired	Important	Immaterial	Rarely	70-85	50-85
GENERAL INDUSTRIAL	RUBBER–Dip. Surgicals Spreading	Important Immaterial	Important	Important Desirable	Desired Desired	Essential Immaterial	Immaterial Immaterial	No Yes	75-80 75-80	25-30 50-55
GENERAL INDUSTRIAL	PRINTING & LITHOG.	Helpful	Essential	Helpful	In cases	In cases	Immaterial	In cases	70-80	45-55
GENERAL INDUSTRIAL	PAPER PRODUCTS	Helpful	Important	In cases	In cases	In cases	Immaterial	In cases	70-80	50-60
GENERAL INDUSTRIAL	CONDITION'G for REGAIN	Important	Essential	In cases	Immaterial	In cases	Immaterial	Rarely	As desired	
GENERAL INDUSTRIAL	TESTING LABORATORY (Hygroscopic Materials)	Important	Essential	In cases	Immaterial	In cases	Desired	In cases	As desired	
GENERAL INDUSTRIAL	STORAGE–Tobacco, Paper Wood Products, Textiles	Important	Important	In cases	Immaterial	In cases	Immaterial	In cases	As desired	
GENERAL INDUSTRIAL	COLD STORAGE–Perishable Foods, Furs	Essential	Important	Immaterial	Immaterial	Important	Immaterial	In cases	As desired	
NON-INDUSTRIAL	AUDITORIUMS ART GALLERIES	Desired Important	Desired Important	Essential Desired	Important Immaterial	Desired Essential	Essential Essential	Small spraying units have been found satisfactory for winter humidifying in many cases	68 68	45 50
NON-INDUSTRIAL	BANKS BEAUTY PARLORS	Desired Helpful	Desired Desired	Desired Desired	Optional Optional	Helpful Helpful	Desired Desired		70 72	45 40
NON-INDUSTRIAL	BUSINESSS OFFICES BROADCASTING STUDIOS	Helpful Essential	Desired Desired	Desired Important	Optional Important	Helpful Desired	Desired Essential		70 70	40 45
NON-INDUSTRIAL	DANCE HALLS DEPARTMENT STORES	Desired Desired	Desired Important	Important Important	Important Important	Desired Helpful	Desired Immaterial		65 70	40 40
NON-INDUSTRIAL	HOMES RESTAURANTS	Desired Important	Desired Important	Immaterial Important	In cases Essential	Helpful Essential	Essential Immaterial		72 70	40 40

AIR CONDITIONING FOR COMFORT AND HEALTH

The human body is remarkable in its ability to adapt itself to a wide range of air conditions. Undoubtedly the reader will recall in his own experiences instances where he exposed himself to extreme weather conditions with comparatively little discomfort and no apparent ill effects on health. Such a subjection, however, actually put severe strain on the body temperature regulating system, and although it may have met the emergency, it was probably accomplished only at the expense of the other organic functions. Over a period of time the human organism will make a measure of adjustment that will ease such a shock, so to speak, but by and large the Eskimo in Alaska and the Fiji on his island both tend to require the same conditions for comfort. Within limits, of course, the human body will adapt itself to environment. A southerner visiting a northern state will shiver in weather that the New Englander finds invigorating and a person living in a cool climate will suffer in the moist heat of the tropics—until acclimatization takes place.

It is evident that to define a universally comfortable air condition is not easy. Individuals, even though used to the same climate, vary in their requirements. Sex makes a difference—because a woman better adapts herself to cold and heat. Physical activity accounts for a wide range of comfort requirements, from the man at rest who needs a blanket, to the worker who labors in his shirt sleeves. Older people usually need more warmth than the younger people do and the man who is robust and healthy is usually uncomfortable in the same air the sickly man needs. Even the season must be taken into account and it is not unusual that a hot day in May is unbearable while the same conditions, repeated in September, make the day seem pleasant.

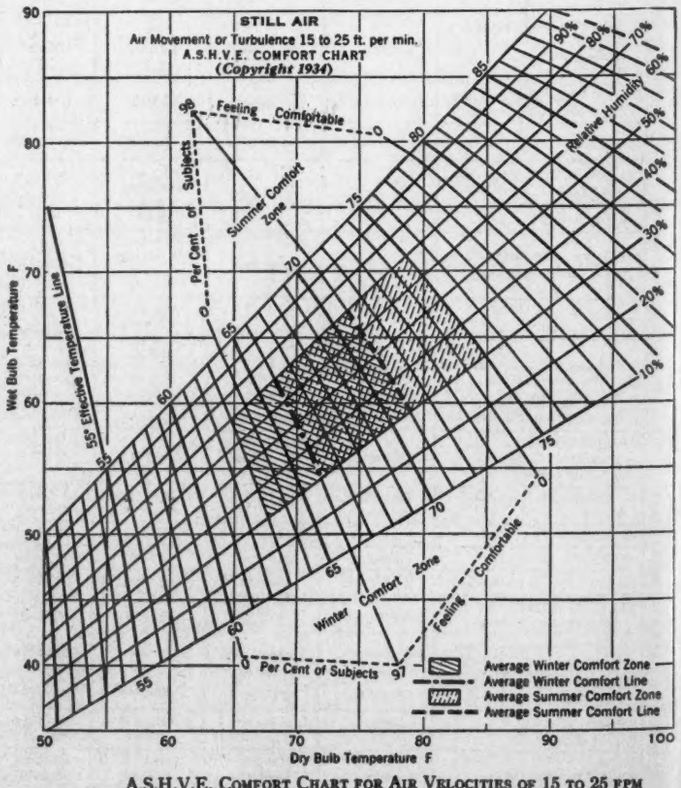
The human organism strives to maintain a constant body temperature of about 98.6°F. The combustion of food within the body (metabolism) produces this heat, but because it is usually well above the temperature of the surrounding atmosphere, there is a constant heat loss through radiation, conduction, and evaporation of moisture. In order to maintain its normal temperature, therefore, the body must effect a fine balance between its rate of heat production and its rate of heat loss.

But the control of temperature alone, as measured by the usual thermometer, does not establish a comfort level. Other elements—humidity, air motion, and radiation make definite contribution. When the air is dry but the temperature is high, the body feels much cooler than when subjected to a lower temperature air which contains a higher percentage of moisture. Air in motion also gives a cooling effect, and radiation, warm or cold, produces a decided sensation. Air, free from objectionable odors, fumes and dust is important to health and comfort.

EFFECTIVE TEMPERATURE

The American Society of Heating and Ventilating Engineers, in a series of tests, established combinations of temperature, humidity and air movement which induce the same feeling of warmth. This they called an "Effective Temperature Index." (Figure below) Hardly an indication of temperature, it is rather a composite index of the elements mentioned above which was computed by experimenting with trained subjects, who, on being subjected to known conditions, stated their reactions. The thoroughness with which this test was carried out makes the result an important contribution to the science of air conditioning.

In using the chart, note that it applies to inhabitants of U. S. only. Also, application of the winter comfort line is intended for rooms heated by central station system of the convection type—not to radiant methods. The summer comfort line is for homes, offices and similar spaces where occupants can become adapted to artificial air conditions but not to theaters, stores, or restaurants, or similar types of public places where persons are exposed for less than three hours, or where exposure is of short duration.



A.S.H.V.E. COMFORT CHART FOR AIR VELOCITIES OF 15 TO 25 FPM (STILL AIR)

(Reprinted by permission, from A.S.H.V.E. TRANSACTIONS, Vol. 38, 1932, Page 410)

FUNCTIONS OF AIR CONDITIONING

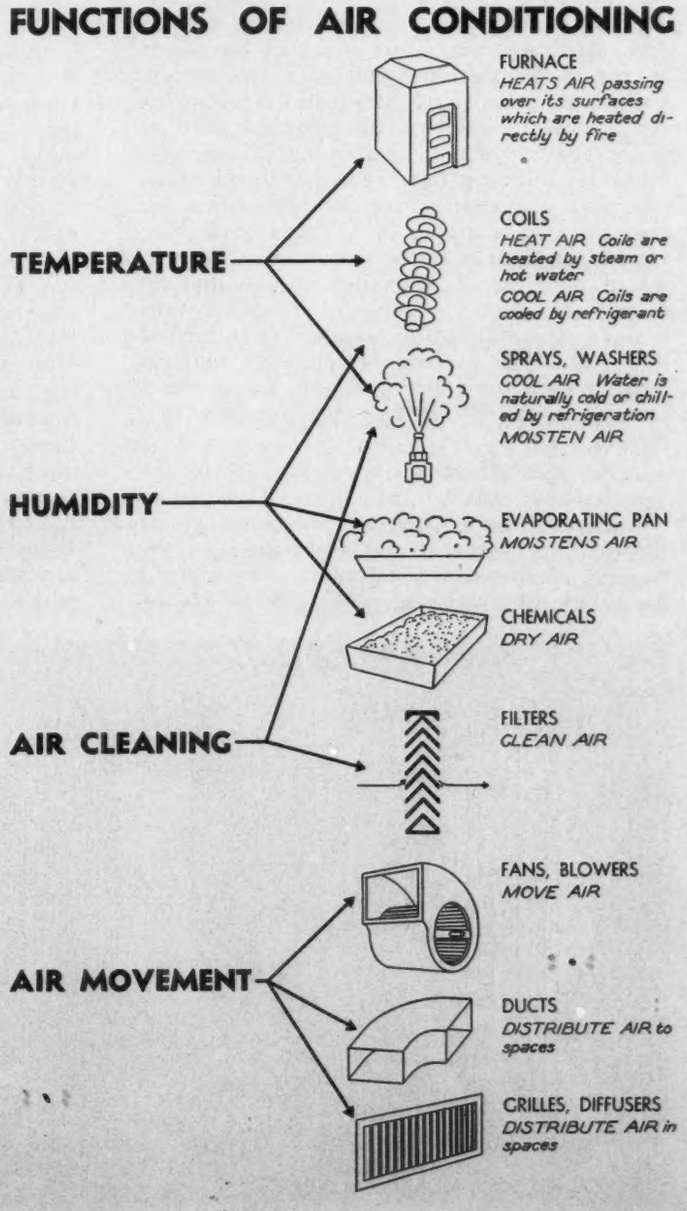
Having reviewed the physical characteristics of air and analyzed the air conditions best suited in industrial and human activity, it remains to describe the various methods by which desired air qualities may be produced. The chart below suggests equipment which will provide the various functions of air conditioning. Even the briefest study of this chart will serve to show the great variety of combinations possible. Add to this the variations in form each particular type of equipment might take and the problem of presenting a clear picture of air conditioning design will be appreciated.

Methods of air conditioning are roughly divided into two classifications, namely (a) duct distribution system and (b) unit conditioning. The duct distributing systems are those which produce conditioned air at a central source and distribute it, by means of ducts, to the several spaces involved. Unit conditioners are self contained units housing the necessary equipment to produce conditioned air within a single cabinet and are usually installed directly in the room involved. Variations and even combinations of both these classifications frequently occur. Types range from systems or units which provide but one of the elements of air conditioning to those which produce complete air conditioning. Thus the common radiator system is, in a sense, an air conditioning system. On the other hand, unit conditioners might fall into the classification of the duct distributing system if short lengths of ducts are used to convey the air to an adjacent room. It would be well, therefore, if the reader would bear in mind that there are no hard and fast rules in the classifications of air conditioning systems.

Although the various functions of air conditioning are produced by the equipment indicated below the performance of this equipment depends on secondary apparatus – sources of heat and cold, sources of energy and power. Heat, in the form of steam or hot water is provided by boilers, or by a furnace which produces hot air. Cold is a product of mechanical refrigeration which includes (1) a compressor to raise the pressure of the refrigerant, (2) a condenser to cool and liquify it and (3) an evaporator in which the refrigerant boils as a result of absorbing heat from its surroundings. Cold is also produced by ice, either by blowing the air directly over it or by using it to chill water which then circulates through a coil or spray that cools the air in turn. Sources of power and energy come from motors, steam engines, steam turbines and internal combustion motors, but electric motors are most commonly used.

Next, the distribution of heat and cold, power and energy, as well as conditioned air must be provided for. Ducts to distribute air have already been mentioned, so add to this piping for steam, hot water, cold water, and refrigerants, plus wiring for electrical energy—and the story is almost complete.

Finally, the various operations must be tied together and the whole system coordinated by means of controls that will assure the maintenance of a desired quality and quantity of conditioned air. How these various functions are provided, how they are controlled—and coordinated, is the subject of the remaining pages.



TEMPERATURE

HEATING—The two methods of providing warmth in a room are known as radiant heating and convection heating. Radiant heating, accomplished by the transmission of heat through space by what is termed "wave motion," does not heat the air in passing through, but *does* heat any object in its path. Convection heating is achieved by the circulation of air which has been warmed by coming in direct contact with a hot surface.

While radiant heating (often called "panel heating") is becoming more important as a result of continuous research and developments, it is not as yet generally used in conjunction with air conditioning systems, hence these paragraphs will deal principally with heating by the convection method.

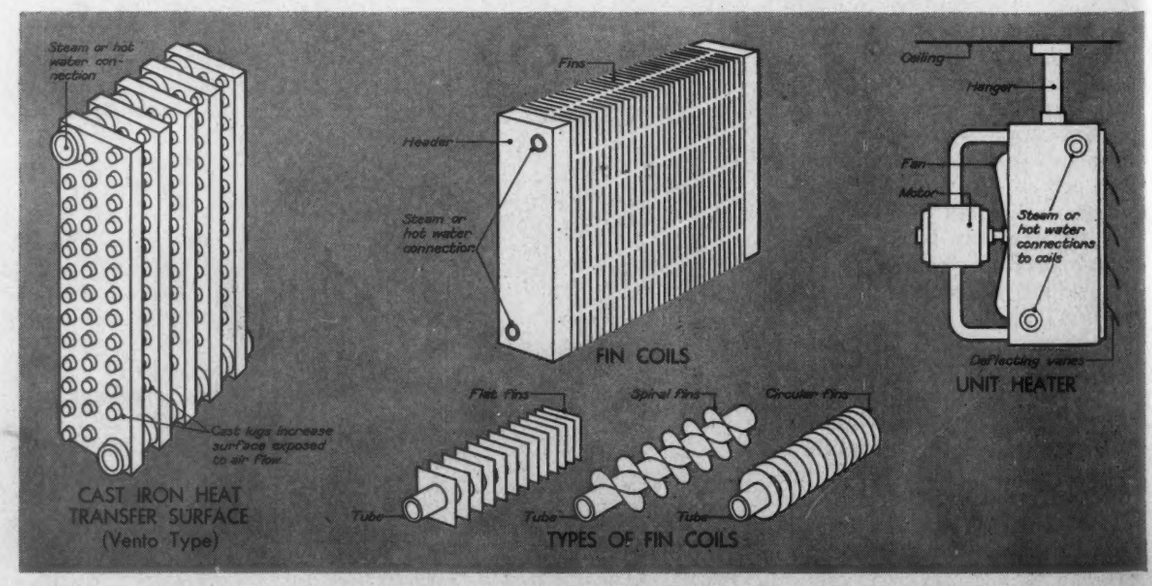
Two types of systems, whose operation depends on convection heating, are in common use. One is the radiator system, the other is the warm air system. The radiator system does offer a certain amount of radiant heating, but the real heating burden is placed on convection. In this system either steam or hot water is used as the medium, and both types enjoy a universal popularity. Steam radiator systems are generally considered the practical solution to the heating of large public and commercial buildings and types have been developed which provide a temperature control unequalled for response and accuracy. A description of these various radiator systems can hardly be presented here but it is enough to say that although they do not provide for the other functions of air conditioning, methods of supplying these functions in conjunction with radiator heating have been achieved and are in every sense practical, if not in some instances preferable.

The warm air heating system may be of the "gravity" or "mechanical" type. The gravity type depends on the natural movement of air through the furnace, and constitutes an extremely inexpensive installation. However, it has many disadvantages which confine its use to the most modest structures. A mechanical warm air system employs a fan to distribute heated air to the various rooms via a system of ducts, and is the logical choice if summer cooling is also to be provided, since the ducts, when properly designed, may be used for both heating and cooling operations. These systems fall into two general classes: (a) furnace systems and (b) central systems.

In the furnace system, the air is heated by passing it directly over the heating surface of the furnace. In the central system, the air is heated in passing through heating coils or cast iron heater sections which have been heated with steam or hot water from a boiler. The coils for heating are usually made up of finned tubes—tubes on which fins of sheet metal have been soldered or are otherwise held. It is their purpose to present as large an area of heated surface to the passing air stream as possible. Cast iron heater sections with cast-on projections are similar in purpose. Both are designed to offer as little resistance to air flow as is practical. Velocities of the air passing through these coils range from 200 to 1500 fpm.

The mechanical warm air furnace system is particularly adapted to residences, small office buildings, school and commercial buildings. Although its application to larger buildings is entirely practical, the central system is used more extensively. The choice of the latter makes it practical to install heating coils in almost any strategic position in the building to provide controlled or zone heating. Such a system also makes it possible to take care of duct connections, but are installed within the special locations where radiators are better adapted, such as vestibules, or for the operation of unit heaters in large spaces.

Unit heaters provide another method of heating that is growing in popularity. Essentially a heating coil and fan (or blower) assembled in one cabinet, these units generally have no duct connections but are installed within the space to be heated. The heating coil is similar to that used in central systems and is heated by means of steam or hot water. Unit heaters are also available with heat transfer surfaces which utilize gas or electricity.



TEMPERATURE

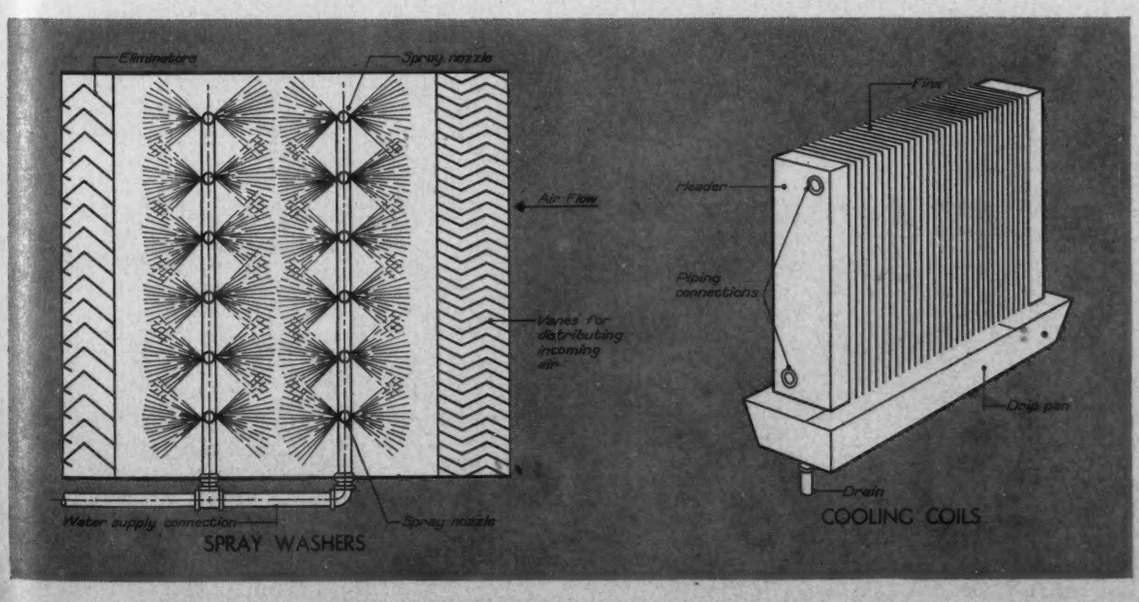
COOLING, DEHUMIDIFICATION—

Because cooling and dehumidification are so closely related, it is difficult not to discuss one without referring to the other. Actually, of course, each could be accomplished separately, but from the standpoint of comfort conditioning the effect would hardly prove satisfactory. Ignore the moisture content but cool the air and the result is a clammy atmosphere; dehumidify without cooling and the air becomes dry and hot. To appreciate this relation, it must be recalled that when air is cooled to a temperature below the dew point it loses moisture, and that the temperature of the air rises when moisture is removed by absorption or adsorption. The difference in the two latter processes is that absorption is that action which sucks up water and causes it to lose its identity, while adsorption is the adhesion of the liquid, in a thin layer, to the solid with which it is in contact.

The cooling of air is provided for in the following two ways: (1) by *surface cooling*, which is the passing of the air stream over a cold surface, or (2) by *spray cooling*, which is the passing of the air through cold liquid sprays. In the first method, the cooling surfaces are usually finned coils similar to those used for heating, except that the fins are spaced further apart to assure proper drainage of the moisture as it condenses on the surfaces. Baffles, called eliminators, are provided at the outlet side of the coils to prevent any entrained moisture from escaping with the air as it passes through. Spray cooling is essentially a tank in which banks of spray nozzles have been placed so as to spray chilled water into the air stream passing through. Here again eliminator plates are provided at the outlet side of the tank to prevent the air from carrying off any entrained moisture.

In both surface cooling and spray cooling, the surface or spray must be cold enough to remove heat effectively. This may be accomplished by the use of refrigerants such as carbon dioxide, Freon, methyl chloride or ammonia. Ammonia is not often used for comfort air conditioning but is employed largely on industrial installations where leaks are not too serious. Cold water, either from a natural source such as a well, or chilled by ice is also used. In chilling the finned surfaces the refrigerant or cold water is circulated through the coils which have been designed to meet the pressure requirements and corrosive action of the particular refrigerant used. In chilling water for the air washer the water may be cooled by actual contact with the ice or by a process involving one of the refrigerants mentioned above.

Dehumidification will take place when the air is chilled to a temperature below the dew point, thereby causing condensation and resultant loss of moisture by the air. This is what takes place when the air passes over cooling surfaces, and all cooling coils are provided with drip pans and a means of draining off water. Spray coolers, paradoxically, will also lower the moisture content of the air by bringing about saturation at such a low temperature that its relative humidity will be comparatively low when it attains the temperature required for cooling. Dehumidification is also accomplished by a process of adsorption. In this method, the air is passed through beds of chemicals which have a great affinity for water, such as silica gel or activated alumina, which cause the water vapor to cling to the surfaces without changing its physical structure. This action does bring about a liberation of heat, however, so that the now dry air must be cooled by means of coils. After these chemical beds have caught as much moisture as they will hold, the air flow is by-passed to new chemical beds, while the ones just used are "reactivated" —heated so that they will lose their moisture. Absorption systems employ a gas or liquid, such as calcium chloride or lithium chloride, which removes the moisture from the air and absorbs the sensible heat at the same time. One method, using what is called the "open absorption system" is something like that of spray cooling. The air is passed through a tank in which a liquid of high water absorbing characteristics is sprayed.



HUMIDITY

Humidification is usually required only in winter. Certain manufacturing processes may need it the year round, but for comfort conditioning it is provided only during the heating season. Even then, during the cold weather, it will not be practical to maintain a relative humidity of much over 20 to 30% since at higher percentages moisture will condense on window panes and other cold surfaces.

Humidification cannot be accomplished without heat. This heat may be furnished in any one of several ways. The water to be used for humidification may be heated; the air to be humidified may be heated; or the water in vaporizing may pick up the heat from the air directly and thus lower its dry bulb temperature.

The air washer, described under cooling, is the most generally used method employed in humidication, particularly in larger installations. In this device the air enters through vanes or louvers and is thereby distributed in an even flow over a bank or banks of sprays. After passing the sprays, the air continues on through eliminator plates so called because they are baffles designed to eliminate any entrained water and prevent its delivery to the conditioned space.

In smaller systems a single spray is often used and is installed either ahead of or after the heating coils.

Two general types of humidifiers are used. One is an atomizer type which breaks the water up into a fine mist, the other impinges a fine stream on a polished plate or target. Sometimes the surface on which the spray is impinged is heated to increase the humidifying capacity, but this is not always the case since it has been found to cause scale formations. Another difficulty encountered with spray nozzles is that they are likely to clog and require considerable attention. As for the water used in this process, on smaller systems, or where water is cheap and plentiful, the excess water is usually wasted, but large installations generally are designed to reclaim this water and use a good part of it over again.

Steam, used directly as a spray for humidification is practical but its use is relegated to industrial application, since it produces odors which prevent its use for comfort conditioning.

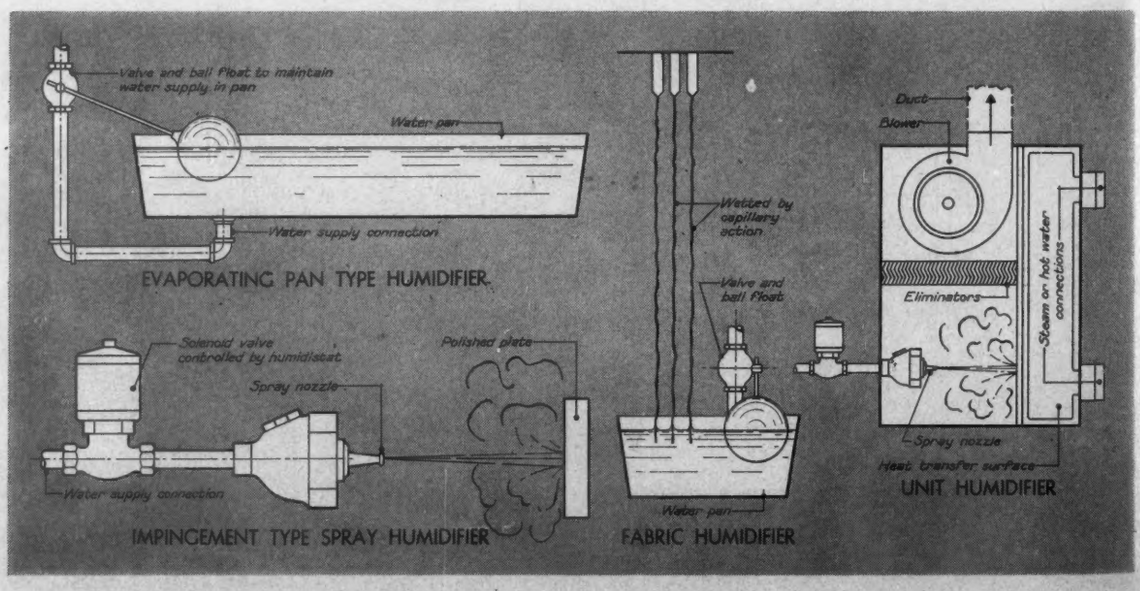
The evaporating pan type of humidier is widely used in air conditioning units. It consists of an open pan that presents as much surface to the air stream as possible. Water in the pan is kept at a constant level by means of a ball float valve, and is heated to bring about a fairly rapid surface evaporation of the water. This type of humidifier is economical in that no water is wasted, but to provide adequate humidification the pan must be of sufficient size, and this is often considerable. One disadvantage to this type is that salts collect in the pan and it requires occasional cleaning.

In the drip humidier, water is supplied to a flat pan through an electrically controlled valve called a solenoid. The pan has small holes in its bottom through which the water escapes and drops through a series of screens in the air stream, which picks up moisture.

The use of capillary surfaces, such as wetted fabrics, porous stones, etc., is another means by which humidification is accomplished. The material, exposed to the air stream with one end resting in a pan of water, relys on capillary absorption to bring the water from the pan up to the portion of its surface exposed to the air stream. The dirt or dust in the air, however, often clogs and fouls the material so that it must be cleaned at regular intervals.

Unit humidifiers for winter use in conjunction with radiator heating systems may be had in a variety of styles and sizes. They consist principally of an atomizer or spray, a coil for heating the air, or a heated surface on which to impinge a spray—and a fan or blower to provide the air circulation.

The author wishes to acknowledge the assistance of: W. Walter Timmis, Mechanical Engineer; Leslie J. Hart, Mechanical Engineer; "Heating, Ventilating and Air Conditioning Guide," and the various manufacturers of air conditioning equipment.



ARTICLE TO BE CONTINUED IN JANUARY ISSUE

DECEMBER EIGHTH

It is War now — Total War. What does that word *Total* mean to you? To us it means that every man, woman, and child in this country has *everything* at stake — that every one of us must from now on measure *everything* we do by its relation to the VICTORY program and that we must contribute everything to it.

We've got to drop the "Defense" attitude. Victory won't be won simply by "defending" ourselves. We must cultivate a positive will to VICTORY and go after that VICTORY with all our might, sacrificing our personal interests as necessary.

Architects have already been contemplating sacrifices and making them. They will undoubtedly have to make more before this is over. From this time forth, for an indefinite period, no private building projects other than those clearly necessary to the VICTORY program (which includes public health and safety) will receive priority ratings for critical materials. Last week the O.P.M. was on the verge of relaxing its restrictions on metals in order to sustain civilian building activity. The events of Sunday, December 7th, have changed the whole situation. With industrial production working twenty-four hours a day, seven days a week, producing guns, tanks, planes, and other essentials, there can be no trifling with the reserve stocks of metals. This is no capricious action by incompetent bureaucrats. The men of O.P.M. are keen and competent and fully aware of the consequences to the building industry of their ruling. They would not have made it if it were not dictated by incontrovertible facts.

To the architects they say, "Save your own time and your clients' money by consulting your own conscience on every job that comes to you. Ask yourself, 'Is this building really essential?' and answer yourself honestly as an American before going ahead with plans and applying for ratings."

The VICTORY CONSTRUCTION PROGRAM for the next year is going to be very large. There will be much housing, industrial buildings, necessary hospitals, necessary vocational schools, necessary community service buildings of various kinds. Rehabilitation of existing buildings into housing for workers will be extensive. Get whatever part of this program you can. If you can't get the job as a private practitioner get in and work on it under some other architect.

PENCIL POINTS will continue to fight for the private architect in the sincere belief that he can serve his country best by operating as an independent professional man. This is no time to quibble, however, about decisions already made where work is already scheduled to go forward under existing government organizations. Many architects have got to do their part as salaried employees. They can be just as conscientious, can exercise just as much skill and energy under those conditions, as otherwise. In doing so they can be of real and effective service to their country. The principal consideration is that the special technical abilities of the architectural man *shall be used* on behalf of the public welfare. For that privilege we will fight as long as we draw breath.

Let us all, we of the architectural profession, strive as we always have (but with redoubled devotion) to serve our fellow man and to make sure that the civilization of free people that is America will be victorious. In that striving we will be true to our heritage of ideals.

KENNETH REID
Editor

TALBOT F. HAMLIN'S CONSTRUCTIVE ARTICLE IN THIS ISSUE WAS WRITTEN BEFORE WAR WAS DECLARED.

PENCIL POINTS

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1941

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"Electro-Sheet" closing in corner of this building provides absolute protection against infiltration of air, dust and water at this vulnerable point. Similar protection is provided at the eaves, around doors and windows and for flashing drip caps. "Electro-Sheet" used here is a product of The Sisalkraft Co., 205 West Wacker Drive, Chicago; the house was built in Johnson County, Kansas. Harry L. Wagner is the architect, R. L. Falkenberg & Co., the contractor.

4196

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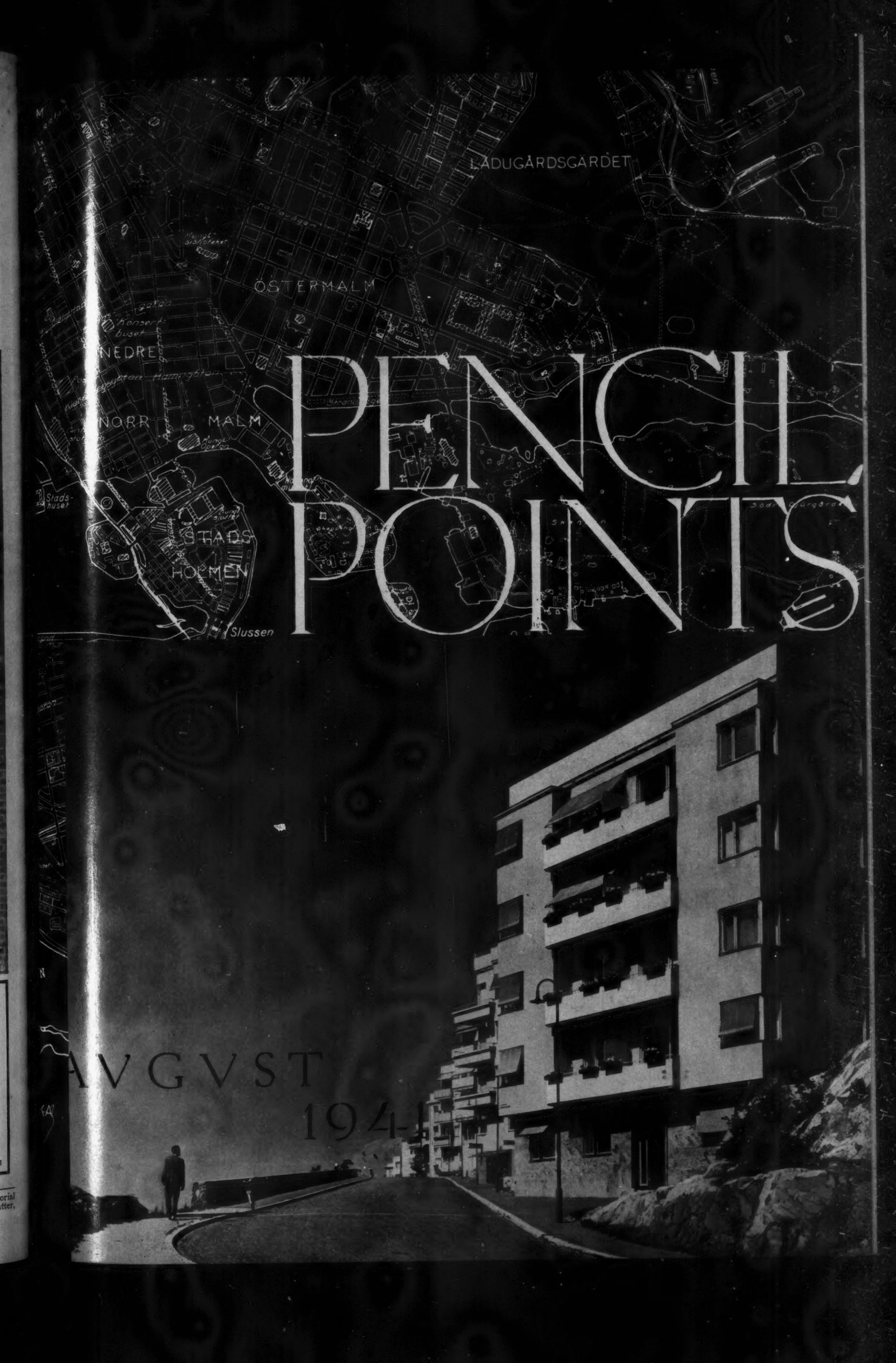
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FOR THIS SCHOOL... *Positive Protection* WITH ANACONDA THROUGH-WALL FLASHING

Beautiful new Kensington High School, Buffalo, New York, completely protected by 3500 pounds of Anaconda Through-Wall Flashing and an unusual batten-seam type Anaconda Sheet Copper roof on its tower. Daniel G. McNeil was the supervising architect for the Board of Education; Joseph A. Sanders & Sons, Inc., Buffalo, the sheet metal contractor.

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ANACONDA from mine to consumer

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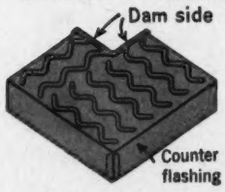

Standard inside corner flashing unit. Dam on inside, drains out.

OUTSIDE CORNER FLASHING

Standard outside corner flashing unit. Dam on outside, drains in.

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CRITICAL YOUTH WIELDS THE FLAIL

"GOOD TASTE" VS. INVENTIVENESS

Good taste in architecture is a very debatable question. To some it does not exist and many who recognize it regard it as a handicap to creative imagination. To my mind, "good and bad" taste in architecture does exist, but this is not to be confused with "good or bad" design. There is always more than one solution to a problem. The individual's taste frequently makes the choice.

This problem of good taste does not stop with architecture but concerns every art allied to architecture —choice of color, applied ornament, landscaping, interior decoration, furniture, and all appointments. The responsibility of the architect does not stop with the design of the building alone; but he must be able to advise on the many scores mentioned. There are, for instance, innumerable designs of chairs which might be chosen for a living room. All would support you, to be sure, but some would be less tasteful than others.

How does all this apply to the student architect? Simply that when one designs one should not permit "capricious inventions" to get the better of the design. Certainly the question should be asked, "Would this be a practical, acceptable creation, which would wear well, and continue in good taste rather than be some fad of the moment, later to become vulgar, useless, and dated?"

All of us have seen a solution to a problem which meets the *requirements* of the program; but many times we wonder who would want it. It is often difficult to imagine yourself or your friends living with some of these attempts to be new, startling, and different. Because everyone is "doing it" or "the stores are full of this or that" does not mean that it is in good taste.

I do not see how a definition of good taste is possible. Even to claim this trait is a bold act; but certainly one of its characteristics is that a thing in good taste weathers the years. We all know old buildings, furniture, etc., which are still in good taste. It is possible even now to tell which of the contemporary work will be in good taste in years to come.

I believe it is possible to be inventive, clever, and progressive and thus produce tasteful work—without becoming bizarre, extreme, or "capriciously inventive."

PAUL PIPPIN
Columbia University

MACHINE HOUSES

The assimilation of the Machine into modern life as an integral and motivating influence has been discussed both eruditely and foolishly many times. The present war affords, if additional emphasis is necessary, conclusive proof of the completeness to which civilization has accepted and is affected by it.

How the individual is to maintain his essential, characteristic unity in such an increasingly cooperative venture is probably the major sociological problem of the next generation. Perhaps in architecture we can discern a stabilizing, even protecting force. Here the assembly line has not taken hold and, except in the production of units of construction, there is no valid reason that it should or evidence to suppose that it will.

While one's bathtub, fountain pen, or car have many thousands of counterparts, a home can and should be tailored to the individual existence. It can express personality, financial position, a particular design for living . . . and most important . . . protect and enhance this valuable singularity.

To stress only the perfection of the functional plan seems to be overlooking the more intangible (and probably equally deserving of study) functions of charm and liveableness. These are the qualities in a design that especially require the architectural mind and talent. These are the qualities that express personality and give to it freedom and an opportunity to expand. The attempt to reduce living to a formula simply to have it express the technological life that surrounds us seems as stupid as producing typewriters in forms that evolved from a study of aerodynamics.

It would seem far more logical for architects to recognize the value of providing a relieving foil for the measured, precise repetitive existence that has become so much a part of our way of life.

ROBERT SAUNIER LUNDBERG
M.I.T.

LET'S GET STARTED

College has always been a place for idealism and now I, in college, find myself falling an easy victim of super ideals and all forms of wishful thinking. This article is just one big wish.

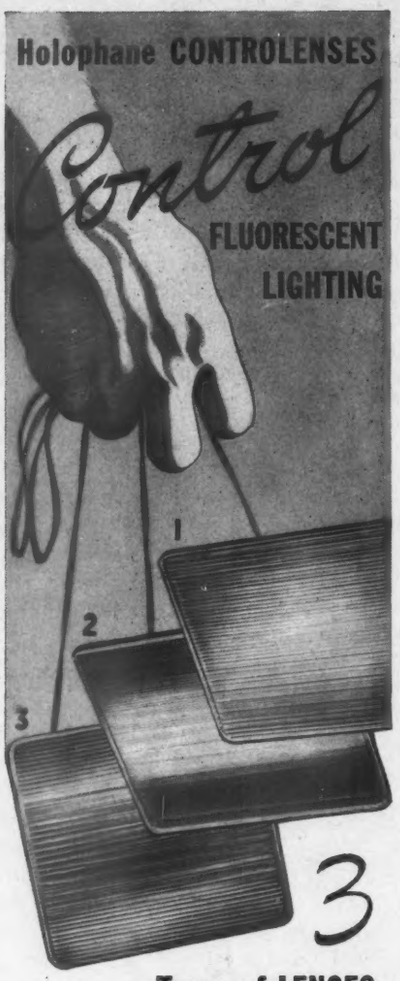
Modern design is getting pretty old now—old enough to have gone through college and to have had three or four years of working experience in a designers' office. In some fields of design, Modern has had some experience and is doing pretty well. But in the $5000 house division it is not doing so well! In fact, in Kansas City and vicinity, a Modern House (by title) looks an awful lot like a Cape Cod cottage or a doll house.

These houses have wonderful plumbing, excellent mechanical equipment, and good paint jobs and it is these three factors that are carrying the Designer-Builder along in business. The Designer part is entirely lacking. Have you ever heard a visitor comment on the spacial qualities of a house, the texture of a wall or the general livableness of the place? No, I think the electric garage door, the bathroom and kitchen—all the mechanical devices—are of far more interest. Wholesome, clean, logical design is not a part of these houses.

It is the year-after-year practice of copying out of the files that has made the general character of the small house outmoded in comparison to transportation, advertising, and mechanical equipment. In drawing from these files of ancient plans the primary principles of modern design have been omitted. Transition of space, light, and growing plants is not found in the new houses: space is limited to cubicles with doors and more doors: functional materials for interiors have not yet succeeded the china-shop type of machine-like finishes that require too much care to enjoy. These omissions are required by the styles of these overworked plans. To get these lasting principles of design into the small house, do away with the old plans and styles and go modern.

I hope that the new small houses of the future will be truly modern. Let them no longer be mainly a display of mechanical devices but be ideal in design!

LYMAN ENNIS
University of Kansas



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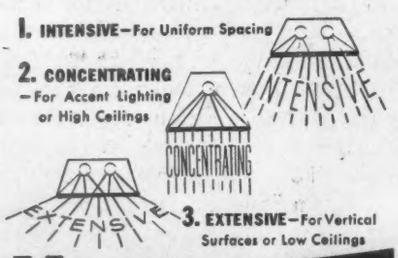

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EVERY KNOCK A . . . .

Too many times have I listened to and read deprecating articles by well-known architects concerning Modern Architecture. Since I am wholly in favor of the Modern movement I hereby present a student's brief on behalf of Modern Architecture. I fully realize my shortcomings as an exponent of any type or style of Architecture due to my lack of actual architectural knowledge and experience. But since the purpose of this section is to give students full opportunity to expound their beliefs, I am hereby taking full advantage of its hospitality.

It seems that the critics of Modern Architecture point many of their remarks toward the student. I'm sure that many of these critics would be very much surprised to find the extent of Modern work being done by students in the architectural schools of today. Granted that much done by students, as much done by professional architects, is not what could be termed finished Modern, and much of it is copied or at least inspired by existing Modern work, at least it is a serious attempt. After all, Modern Architecture is still in its primary stages. Yet in its short life thus far it has made tremendous strides. We students who believe in Modern are seriously studying the works, good and bad, and all the available writings concerning this great phase of Architecture. It will be up to these students to carry the cause of Modern still further ahead.

Modern Architecture has ceased to be a fad; in fact, to the faithful, it was never thought of as a fad. It is a real, vital, living architecture. It is truly an architecture born of modern needs for modern people and modern functions.

All this criticism against Modern Architecture and its great exponents, *Frank Lloyd Wright, Gropius,* et al, is only spurring them and their followers on to greater results. All healthy things thrive on criticism and Modern Architecture is no exception. We student believers in Modern realize this fact and are digging in all the harder to insure ourselves against being termed "copyists" and to insure ourselves against perpetrating any more of the corner-windowed, glass-blocked atrocities held up as typical examples of Modern Architecture. We realize too, that the way of a serious Modern Architect is not an easy one and that much hard and honest labor will be necessary to insure Modern of a healthy progress.

We students are continually being told that in order to do good architecture, Traditional or Modern, we should be well versed in Classic fundamentals. Happily, the courses presented to students in History of Architecture only more strikingly prove to us how unapplicable the past styles of architecture are to present-day life and needs; and only more conclusively prove to us that Modern Architecture is the Architecture for today. We believers in Modern will give our all to insure the cause of Modern Architecture a long, full life despite the criticisms directed its way.

JOHN M. HIRSCH
Syracuse University

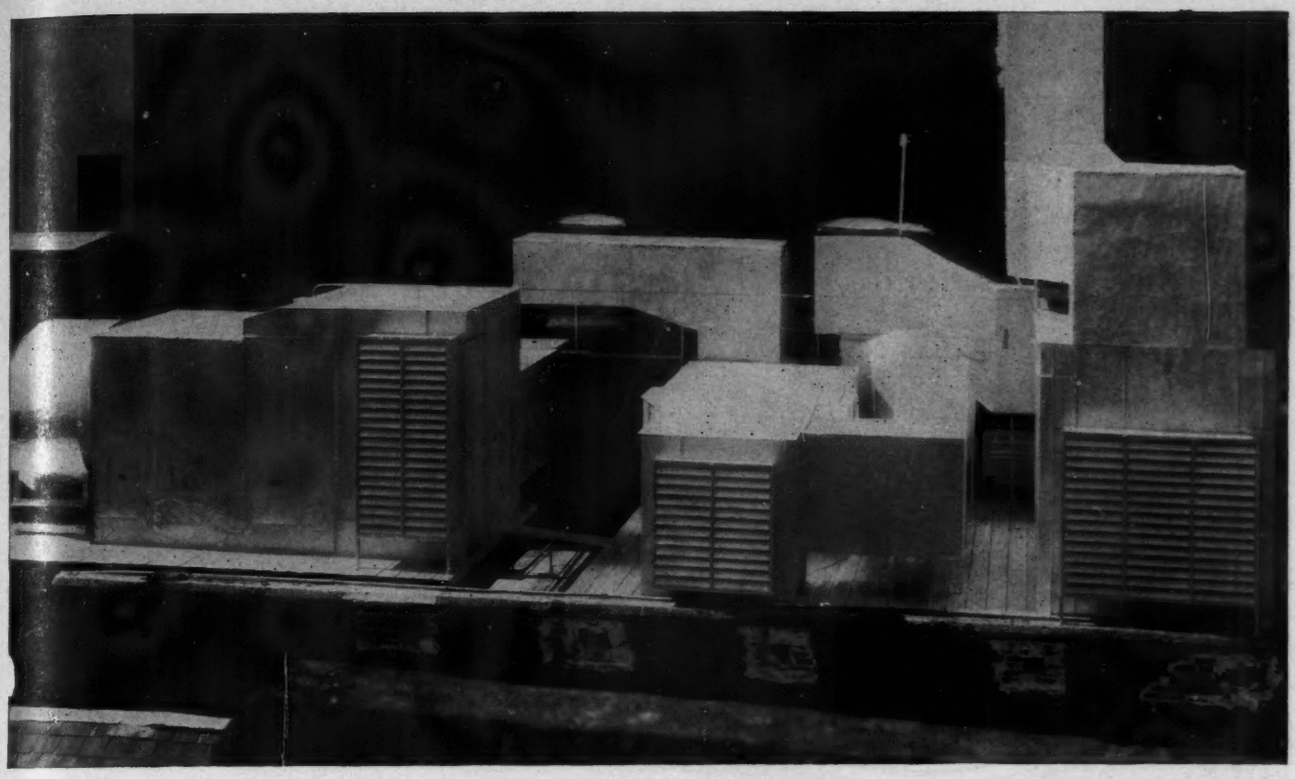
THE "RIGHT" COLOR

From the beginning, color on the exterior of buildings has been considered a necessary element of architecture. The Egyptians covered their walls with a pattern of hieroglyphs, men and gods painted in brilliant flat tones. The Babylonian and Assyrian palaces were made interesting by friezes of colored tiles. The Greeks and Romans painted their temples and the Byzantine and Gothic builders colored their cathedrals. The Early Renaissance employed polychrome terra cotta. But somewhere along here the great tradition of brilliant color on buildings died out.

The color was gone from the originals and was left off the copies more and more until, under pressure of the smoke of the new industrial era and the poor taste of the Victorian Era, its final shades simulated rigor mortis in a depressing series of muddy browns. Since that time, people consciously or unconsciously have dulled their natural love of color. Anything having a semblance of life or brilliance is frowned upon by the sophisticates as being barbaric and the architects, in a quandary, leave all their houses and buildings grey, white, buff, tan or cream, depending only on the shadows to give an interest to the surface.

But color is a necessary and a beautiful appeal to the emotions and as such could be a great help to modern architecture. It is a field which has received scant study but which is as requiring of study as plans, masses, and volumes. By this I do not mean a study of graded shades, such as we all have been exposed to in painting

(Continued on page 12)



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Sheet metal men prefer Youngstown Galvanized Sheets because they are made right — made by men whose long experience has given them skill to produce sheets of unvarying excellence, of uncommon ductility and workability, with a smooth, uniform, protective coating of zinc which positively adheres during work and through long years of service as well.

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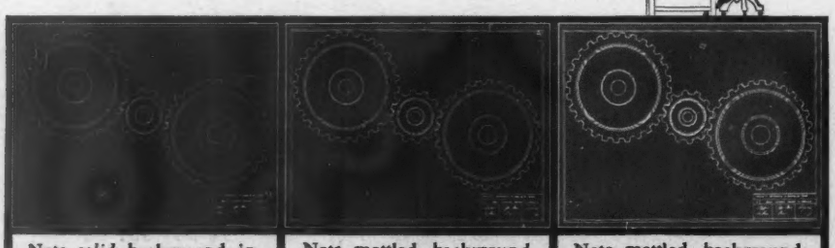

Note *solid* background in the "Print" reproduction from P.T.M. Drawing

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pictures of buildings on paper, but a study of the psychological effect of color on our everyday lives and an application of color to our buildings.

This research is badly needed to supplement our technical skill in producing permanent, easily-cleaned, colored materials—enameled metals, ceramics and glass. It is needed to enable designers to place the right color in the right place for the right purpose. Schools could assist immeasurably in this study, for the field has scarcely been touched yet and the need for correct knowledge of the application of color is growing. The sooner we begin this research the sooner our buildings will function psychologically as well as physically.

J. STARKE HAMILTON, JR.
Georgia Tech.

★ ★ ★

BUILDING METHODS

A general course of instruction in "Home Building Methods" is to be conducted August 18-30 at the Horton School of Finance and Commerce of the University of Pennsylvania, under auspices of the *Home Builders Institute*, of the National Association of Real Estate Boards, in an effort to train operative builders in the techniques demanded to create an estimated 200,000 to 300,000 new dwelling units for defense emergency housing.

Paul E. Starke, Madison, Wisconsin, a home builder and former President of the National Association of Real Estate Boards will be Dean of the course. A number of FHA executives have had part of the preparation of the syllabus for this course and FHA divisional chiefs will serve on the faculty with realtors public relations executives, educators, Technical editors, and two architects — *Randolph Evans*, New York, and *Kenneth W. Dalzell*, East Orange, New Jersey.

Any home builder of sufficient background and experience to pursue the course profitably may enroll, *David D. Bohannon*, President of the Institute states. Students will meet with the faculty in informal quiz sessions every evening in the school dormitories—the students doing the quizzing. They will make field trips to interesting building operations in the Philadelphia area. Tuition for the course is $70. Dormitory facilities are available at $1.00 a day.

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HERE, THERE, THIS & THAT

POTOMAC PATTER

So it takes an emergency situation, does it?

It does. The belated realization by Congress that the nation is pitifully short of proper hospitalization and inadequately prepared to care for its citizens on a huge scale health program has brought about legislation to make funds available to existing hospitals for expansion of their facilities; so Washington, long in need of additional hospital facilities, is taking action steps to procure the necessary funds to expand its public and private hospitals. Preliminary study plans have already been completed by *Faulkner & Kingsbury* for a huge addition to a general hospital (The Garfield); *Porter & Lockie*, with the aid of one of *Jos. A. Parks* inimitable renderings, have prepared study drawings for a substantial annex to the Columbian Hospital for Women; and *Buckler & Fenhagen*, of Baltimore, have made drawings for an addition to the Children's Hospital. Under the able guidance of Architectus Specialistus Hospitalus *Charles F. Neergard*, Consultant for the Health Security Administration, which office gives the aye or nay on the dispersion of the enabling gold (or is it silver), these plans will be surveyed, hashed and rehashed until the day when it can be said that it will take so many chunks of platinum to bring the dreamed-of structures and their consummate earthly good into the third dimension. And if the H.S.A. thinks that the loan of a few millions ($15,000,000 was allocated to your nation's capitol) is a good risk, they will "aye" and we will have what we need. Little thanks to a usually disinterested Government, both federal and local, but now less thanks to an emergency which requires preparedness for any situation. Of course, the above-mentioned offices will have the work (we hope) but will sufficient architectural and engineering help be available to shoot the drawings out fast enough?

For the emergency has taken practically all of the available talent into government offices. The local architects, busy with housing, new office space, and remodeling, cannot get help. This boom is really the tops, but the lid might blow any minute now! With priorities and the uncertain procurement of structural materials, how can drawings be made (at a profit) for structures that may not be built? Sue, if you must, but your draftsman assuage; pay him on time and a reasonable wage.

Apropos the proper wage, latest action by Public Buildings Architectural men has been a petition signed by over 300 aggrieved Permanents requesting the powers-that-be for additional remuneration in consideration of their efforts in both good and bad times and in view of the increased cost of living under the present emergency situation. It is understood that the petition was turned over to *Louis A. Simon*, Supervising Architect, who apparently is most sympathetic and understanding of the request. We have a feeling that Mr. Simon will uphold the boys. RED

HOUSING STUDY

On June 3, at the offices of the United States Housing Authority, *Nathan Strauss*, the Administrator, organized a committee of architects and others he had called together to discuss ways and means of improving

(Continued on page 54)

Ground has been broken next to the New York Navy Yard in Brooklyn for "the world's largest public housing project," shown below in an aerial perspective. Fort Greene Houses will cost $20,404,000 (State funds) and will accommodate 3,501 families. It is the first project of the New York State Program directed by Edward Weinfeld, State Housing Commissioner; and William F. R. Ballard, Housing Consultant, is Coordinator of the units being designed by Associated New York Architects

NEW TECHNIQUE OF DAYLIGHT TRANSMISSION

Twin photographs show why INSULUX Prismatic Block provide more usable light, evenly distributed

PHOTOGRAPHIC DATA: All photos made with same camera on one film roll with sunlight brilliant. Exposures: Both pictures facing opening, 1/50 second, stop f.9. Both pictures facing rear wall, 1/50th second, stop f.5.6. All prints given same exposure in printer. No retouching.

THESE photographs tell better than words that INSULUX Prismatic Block offer architects a new technique of using natural light—economical *re-direction and distribution* of daylight for even lighting, without glare.

All photographs were made in pairs 1 minute apart, at 1 p.m., April 9, 1941, at latitude of 40° north. Wall opening 5.5 per cent of floor area.

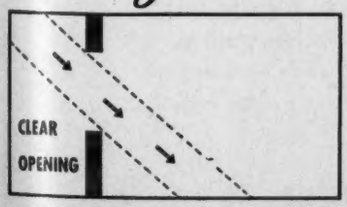
The comparison is striking — INSULUX Prismatic Block vs. a free, unglazed opening, which obviously admits maximum available light. Yet note the better lighting on rear and side walls when INSULUX panel is put in opening.

The principle is simple: Refraction of natural light upwards to a reflective ceiling, plus diffusion for even distribution. No system of louvers, reflectors or baffles are as all-around efficient and as permanently economical as INSULUX Prismatic Block.

Panels of No. 351 Prismatic Block above eye level, with No. 350 No-Glare Block below eye level, can be used on any exposure without glare.

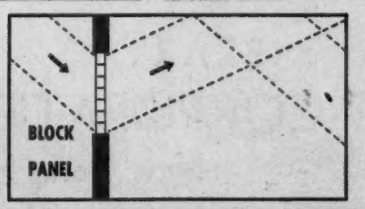
INSULUX Prismatic Block logically solve the problem of ample, usable daylight in industrial plants, offices, or any large interior. Owens-Illinois Glass Company, Insulux Division, Toledo.

OWENS-ILLINOIS
INSULUX
Glass Block

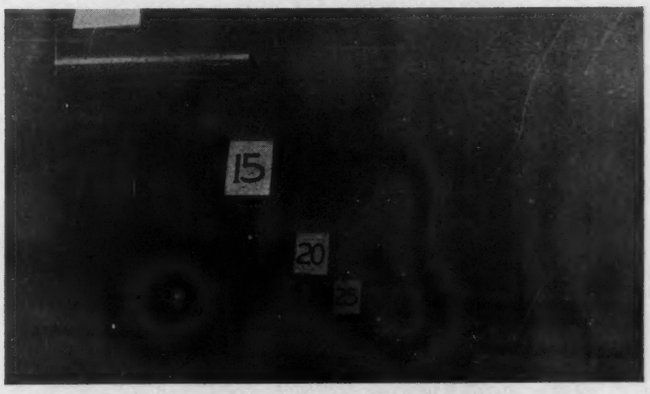


Drawing at left shows path of direct light through free opening —downward to floors, which absorb up to 85%. Direct sunlight would make shading necessary to avoid glare near opening, comparative darkness in other areas.

Drawing at right shows path of direct light through INSULUX Prismatic Block — upwards to ceiling, which reflects up to 85%. Diffusion spreads light horizontally. No-Glare Block would be used in panel below eye level.



Sole opening in 23 x 25 room is free, without glass. Little light on ceiling or nearby wall.



View towards rear wall with opening free. Note lack of wall detail, poor light on last card.

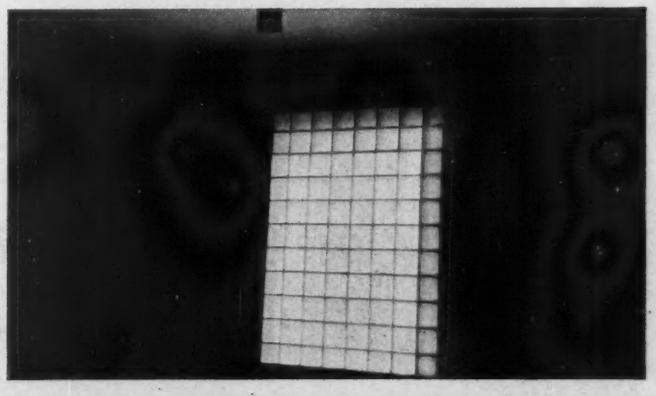


Photo taken 1 minute after top picture, with INSULUX Prismatic panel in place. Note man at right, present but not visible in top photo. Faintly visible, right, is extra test panel hung on wall.

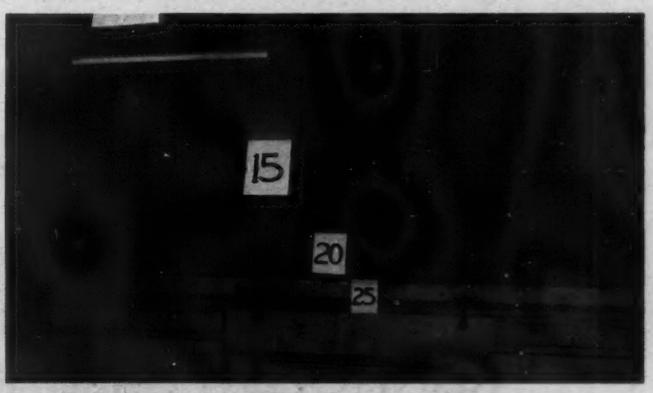


Photo taken 1 minute after twin photo above. Compare detail on rear wall, lighting of cards. Note also uniform lighting on the ceiling from first to last card.

PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Replies to box numbers should be addressed care of PENCIL POINTS, *330 West 42nd Street, New York. 25 words or less in this Department FREE—over 25 words ten cents per word should accompany all notices. Copy must be in by 12th of month* preceding date of issue.

CONTROLLED FLUORESCENT LIGHTING THROUGH HOLOPHANE CONTROLENSES. — New brochure, featuring three recently-developed Controlenses, describes the optical performance of each, lists their advantages, shows how results can be predicted and describes and illustrates equipment using them. Included is a list of the manufacturers who have designed these various units. 16 pp. 8½ x 11. Holophane Co., Inc., 342 Madison Ave., New York, N. Y.

UNIT HEATING BY CARRIER.—A.I.A. File No. 30-d-11. Condensed handbook presenting detailed rating tables for the selection of the correct requirements for unit heating for commercial and industrial requirements. Included are tables covering different steam pressures together with hot water basic ratings, piping and wiring diagrams, also typical building layouts. 24 pp. 8½ x 11. Carrier Corp., Syracuse, N. Y.

BUILD A BEAUTIFUL HOME WITH BEAUTIFUL WINDOWS. — Attractive new brochure prepared especially to assist architects in the planning of beautiful window treatments. Profusely illustrated with photographs of exteriors and interiors of homes picturing the finished effect of Ceco steel casement windows. Included is data on metal frame screens and storm sash, also on Bonderizing treatment given all Ceco casements and screens. 24 pp. 8½ x 11. Ceco Steel Products Corp., 5701 W. 26th St., Chicago, Ill.

NEW IMPROVED A-H & H CIRCUIT BREAKERS. —A.I.A. File No. 31-d-4. Bulletin listing and illustrating three general types of A-H & H circuit breakers for a wide range of lighting and power circuits. Suggested specifications, price list, box dimensions and knockouts. 12 pp. 8½ x 10. The Arrow-Hart & Hegeman Elec. Co., Industrial Control Div., Hartford, Conn.

MARBLE IN THE HOME.—Bulletin, dealing with the subject of Vermont marble, illustrates numerous applications for marble in the home, including bathrooms, fireplaces, entrances, staircases, floors, window stools, table tops, etc. 8 pp. 8½ x 11. Vermont Marble Co., Proctor, Vt.

JOSAM PRODUCTS FOR U. S. GOVERNMENT REQUIREMENTS.—A.I.A. File No. 29-C. Catalog GS illustrates and describes the Josam line of plumbing drainage products which are approved for use in all U. S. Government projects. Dimension drawings and tables. 30 pp. 8½ x 11. Josam Mfg. Co., Empire Bldg., Cleveland, O.

NEW BILT-WELL SUPERIOR UNIT WINDOWS.—Folder describing the construction and advantages of a new line of complete unit wood windows. Specifications, details, etc. 4 pp. 8½ x 11. Carr, Adams & Collier Co., Dubuque, Iowa.

(Continued on page 44)

—ARTHUR L. GUPTILL'S—

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The student draws directly on these sheets, using the printed lines as a guide for proportion and referring to the corresponding illustrations in the book for suggestions as to technique. The text of the book describes the best pencils for all such work and explains the procedure. These sheets have been popular in pencil classes as well as with the individual.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 42)

VENEERS.—A.I.A. File No. 19-e-5. Folder prepared especially for architects and designers giving useful reference data on the principal veneer cabinet woods. The data covers commercial names, botanical names, origin, color range, types of figures available, price range, hardness, how cut and approximate maximum widths and lengths. 4 pp. 8½ x 11. The Veneer Assn., 616 S. Michigan Ave., Chicago, Ill.

MODEL C ELECTRO-MATIC AIR FILTER. — Bulletin No. 250-C describing and illustrating the construction and operation of the model C Electro-Matic self-cleaning air filter. Diagrams and cut-away sections show how electrical precipitation and automatic air filtration have been combined in a compact, self-contained unit. 16 pp. 8½ x 11. American Air Filter Co., Inc., Louisville, Ky.

WESTINGHOUSE WATER COOLERS. — Folder 1WC-0201 illustrates and briefly describes a line of water coolers for general industrial and office use. 8 pp. 8½ x 11. Westinghouse Elec. & Mfg. Co., Dept. 7-N-20, East Pittsburgh, Pa.

EMERSON ELECTRIC VENTILATING AND EXHAUST FANS.—A.I.A. File No. 30-d-1. Catalog X4059 describing and illustrating the Emerson line of exhaust and ventilating fans for commercial, industrial and domestic installations. Dimensions, performance and prices are included for all fans. 16 pp. 8½ x 11. The Emerson Electric Mfg. Co., St. Louis, Mo.

FIR-TEX SUPER INSULATING BOARD. — A.I.A. File No. 37. New catalog for architects and builders, dealing with the subject of Fir-Tex insulating board, presents master specifications for interior finish, sheathing, plaster base and roof insulation. 16 pp. 8½ x 11. Fir-Tex Insulating Board Co., Porter Bldg., Portland, Ore.

MENGEL BOARD.—A.I.A. File No. 19-e-5. Catalog describing Mengel Board, a type of hardwood wall paneling for homes, offices, hospitals, etc. Installation details and instructions. 8 pp. 8½ x 11. The Mengel Co., Inc., Louisville, Ky.

AUSTRAL MOVABLE BLACKBOARDS.—A.I.A. File No. 35-b-13. Bulletin with descriptive and specification data covering the Austral line of movable blackboards with Griptite all metal trim. 4 pp. 8½ x 11. Austral Sales Corp., 101 Park Ave., New York, N. Y.

GRID UNIT HEATERS.—A.I.A. File No. 30-d-11. Useful reference guide for architects and engineers covering a type of unit heater for industrial applications. Capacity tables, piping layouts, dimensions, etc. 16 pp. 8½ x 11. The Unit Heater & Cooler Co., Wausau, Wis.

ILG PROPELLER FANS.—Catalog No. 141, just issued, presents specifications for the complete line of Ilg products, together with illustrations, including diagrams and installation views of propeller fans, automatic shutters, fan guards, power roof ventilators, dark room ventilators, special high speed fans, portable floor fans, night cooling fans, kitchen ventilating fans, and volume blowers. Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago, Ill.

ZURN GREASEPTOR.—A.I.A. File No. 29-c. Folder giving detailed description of a type of interceptor for preventing grease from clogging drainage and sewer lines. Installation data and details. 6 pp. 8½ x 11. J. A. Zurn Mfg. Co., Erie, Pa.

(Continued on page 46)

In Columbia they sing...

The handsome Colonial façade of the Singley Apartments, Columbia, S. C., is of portland cement stucco made with Atlas White Cement. Architect, Heyward S. Singley; General Contractor, M. B. Kahn Construction Company; Stucco Contractor, John W. Riley Sons—all of Columbia.

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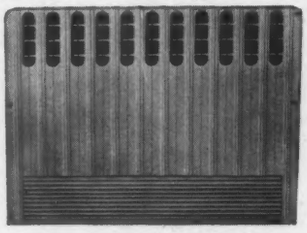

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 44)

FIREPLACES AND HOW TO BUILD THEM. — A.I.A File No. 14. Catalog No. 13, just issued, gives detailed data on three types of non-smoking, free-burning fireplaces. It describes and illustrates the correct rise of dampers, smoke chambers and complete units of both recirculating and fresh air types. It also illustrates a number of attractive fireplaces in good taste; also fireplace accessories. 12 pp. 8½ x 11. The H. W. Covert Co., 339 E. 48th St., New York, N. Y.

FENESTRA INDUSTRIAL STEEL WINDOWS. — A.I.A. File No. 16-e-1. Reference book for architects covering the Fenestra line of pivoted, projected security and continuous windows and operators. Included are specifications, types and sizes, full size sections and installation details. 40 pp. 8½ x 11. Detroit Steel Products Co., 2250 East Grand Blvd., Detroit, Mich.

BYERS WROUGHT IRON FOR RADIANT HEATING INSTALLATIONS. — Valuable collection of text material, photographs, tabular matter and piping diagrams for architects and engineers in brochure form devoted to the subject of radiant heating. It describes the history, theory and advantages of radiant heating, calculation principles for the design of radiant heating installations, also selection and fabrication of pipe. Numerous typical radiant heating installations are described and illustrated. 44 pp. 8½ x 11. Copies of brochure may be obtained upon request on business stationery to A. M. Byers Co., Pittsburgh, Pa.

FEDDERS TYPE K HEATING COILS.—A.I.A. File No. 30-f-4. Catalog AC601, dealing with the subject of Fedders type K heating coils, presents much useful material which saves time for those who design large heating systems. Included are series of useful time saver charts and fully developed tabular data arranged to simplify tabular coil selections, together with piping diagrams. 52 pp. 8½ x 11. Fedders Mfg. Co., Inc., Air Conditioning Div., Buffalo, N. Y.

NEW POST DRAFTING AIDS.—Series of attractive panels, 10 in. by 12 in., each bearing a single instruction or caution, such as "Remember to Keep Detail Open, Opaque and Sharp—for Perfect Blueprint Reproduction." They are intended to be hung on the walls of drafting rooms as constant reminders to draftsmen to watch their work closely to avoid the necessity of alterations in drawings and consequent loss of time. The Frederick Post Co., Box 803, Chicago, Ill.

METAL LATH NEWS.—A.I.A. File No. 20-b-1. May issue of this publication, devoted to the subject of furring, reviews the different methods of furring and anchoring. 8 pp. 8½ x 11. Metal Lath Mfrs. Assn., 208 S. La Salle St., Chicago, Ill.

ORCO SAFETY TREADS AND FLOORING.—Catalog containing useful reference data for architects on the subject of Orco safety treads and flooring. Included are suggested specifications, installation details, size data and color chart. 8 pp. 8½ x 11. The Ohio Rubber Co., Willoughby, Ohio.

MURCO UNIT HEATERS.—A.I.A. File No. 30-d-11. Catalog describing a line of unit heaters for use in industrial buildings, stores, restaurants, shops, gymnasiums, garages, etc. Dimensions, capacity tables, etc. 12 pp. 8½ x 11. D. J. Murray Mfg. Co., Wausau, Wis.

(Continued on page 48)

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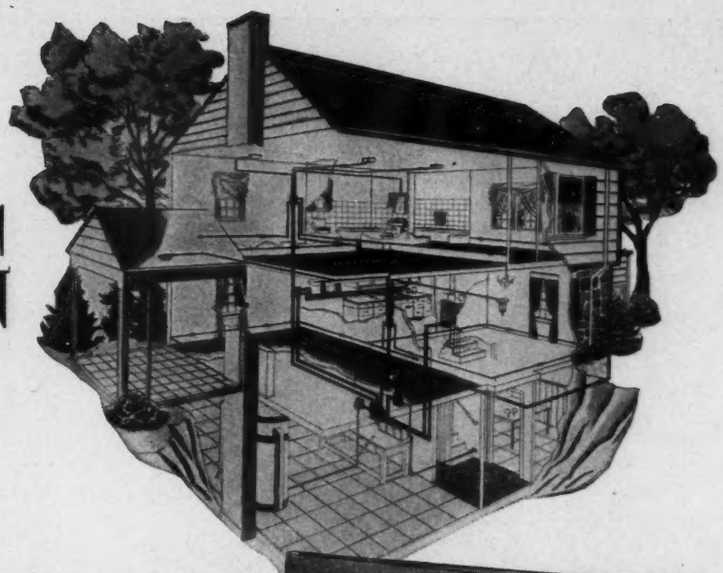

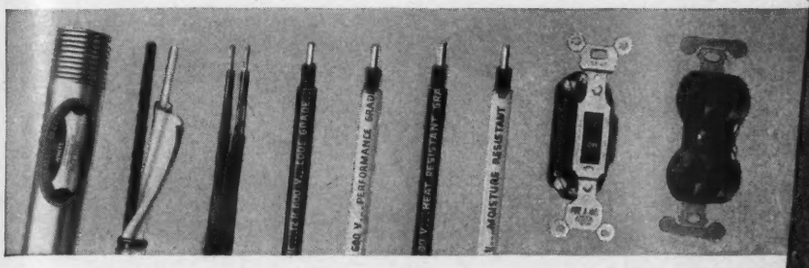

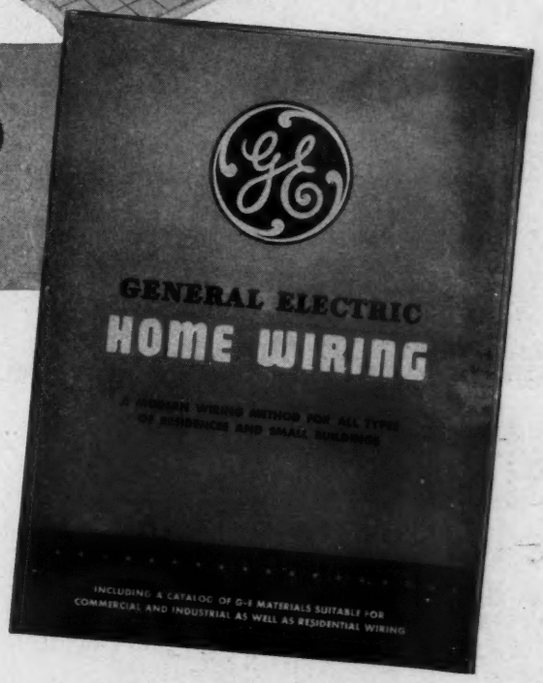
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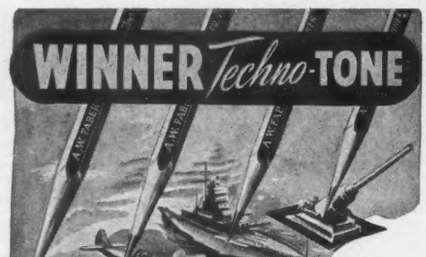

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 46)

PARLON BASE PAINTS FOR CONCRETE SURFACES.—Booklet discussing the advantages, chemical resistance and application of the new Parlon base paints for protecting and decorating concrete, plaster, stucco, cement, asbestos boards, brick and similar materials. Hercules Powder Co., Inc., Cellulose Products Dept., Delaware Trust Bldg., Wilmington, Del.

THE NEW TREND IN HOME FURNACE DESIGN.—Brochure dealing with the Mueller warm air system of heating and air conditioning explains the various types of heating equipment most commonly in use in the homes of today, and outlines the advantages of each of the three types of fuel—coal, oil and gas—that may be used. Numerous models of Mueller equipment are illustrated and described in detail. 24 pp. 8½ x 11. L. J. Mueller Furnace Co., Milwaukee, Wis.

WOOD FIBRE CARVINGS.—Catalog No. 122 illustrates a selection of wood fibre carvings, especially adaptable for mantels, cabinets and architectural trim. A group of composition shells for cabinets and niches are also shown. 12 pp. 9 x 12. Decorators Supply Co., Peoria and 26th Sts., Chicago, Ill.

TRUSCON FLOOR-PATCH. — Folder describing a new type of patching compound for holes and ruts in concrete floors. Application directions are included. 8½ x 11. Truscon Laboratories, Detroit, Mich.

MANUFACTURERS' DATA WANTED

EDWARD H. PETERS, *Architect,* 518 Newnan Street, Jacksonville, Fla. (Data for complete A.I.A. file.)

CLARENCE WARREN DOLL, *Architect,* Donnell Building, Mattoon, Ill. (Data for complete A.I.A. file.)

VINCENT D. CASE, *Assistant Architect,* U. S. Engineers Office, 751 South Figueroa Street, Los Angeles, Calif. (Data for complete A.I.A. file, also data on equipment for airport construction.)

E. W. CARROLL, *Architect,* El Paso Public Schools, 2520 San Jose Street, El Paso, Texas. (All data as well as A.I.A. data to start a complete new architectural file.)

P. ARTHUR D'ORAZIO, *Architect,* 656 Bryson Street, Youngstown, Ohio. (General data, and data for complete A.I.A. file.)

MICHAEL R. PRUSACK, *Designer,* Verona, Kentucky. (Data for complete A.I.A. file, and data for residential work, for drafting room, also samples.)

BURTON F. BOOTH, *Draftsman,* 821 N. Court Street, Rockford, Illinois.

JOHN F. PASSAFIUME, *Designer,* 325 East 5th Street, New York, N. Y. (Data for complete A.I.A. file, and data on residences, small commercial buildings.)

CARROLL S. RANKIN, *Draftsman,* Office of the Quartermaster, Fort Thomas, Kentucky. (Data for complete A.I.A. file.)

ARNOLD M. FRANKEL, *Cost Estimator,* Cost Department, Contractors Pacific Naval Air Bases, P. O. Box 2459, Honolulu, T. H.

JAMES RUKLIC, *Student,* 12434 Highland Avenue, Blue Island, Ill. (General literature and data for complete A.I.A. file.)

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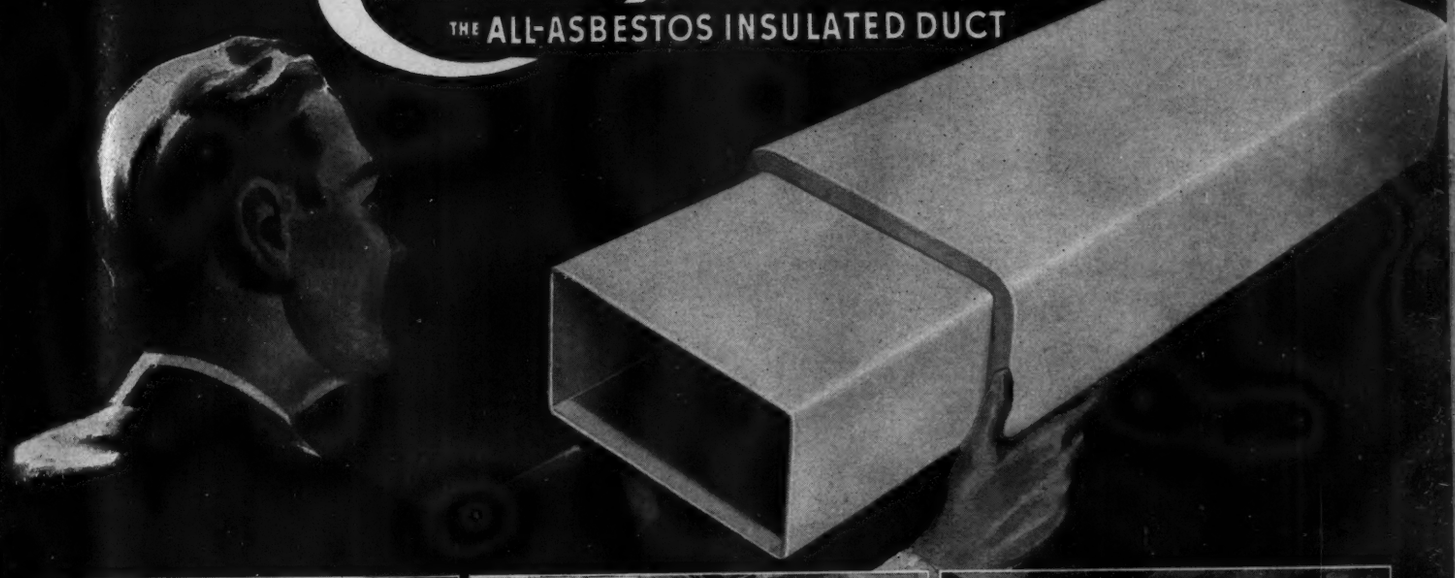

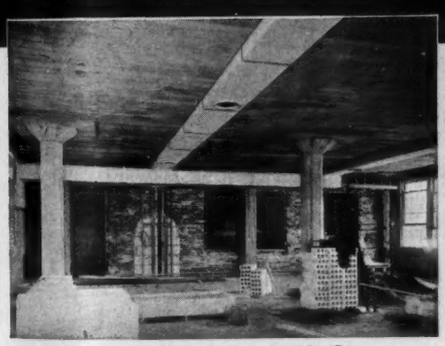

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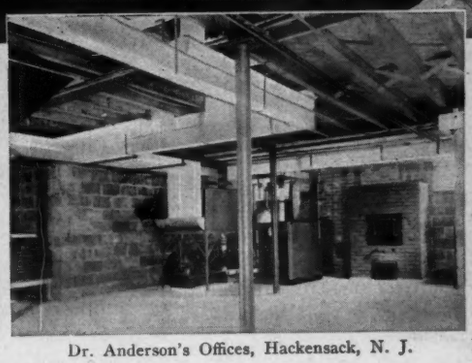
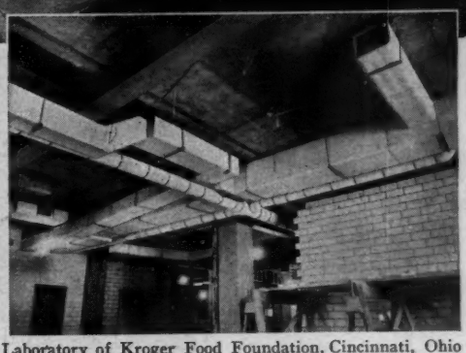


Dr. Anderson's Offices, Hackensack, N. J.



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(Continued from page 36)
the architectural level of USHA work.

The Committee consists of: *Rudolph Adler*, Atlanta, Georgia; *Henry S. Churchill*, New York; *Talbot Hamlin*, New York; *Don Hatch*, New York; *Albert Mayer*, New York; *Howard Myers*, New York; *George Nelson*, New York; *Eero Saarinen*, Bloomfield Hills, Michigan; *Edward Stone*, New York; and *Hugh Stubbins, Jr.*, Boston, Mass. *Howard Myers* was elected chairman.

It is planned to make this body a continuing committee, and to add to its personnel other members representing the various other regions of the country.

Mr. Strauss, Mr. Seaver, and Mr. Shire, the Chief Technical Adviser, presented the problem, as the USHA sees it, and Mr. Strauss expressed the hope that concrete recommendations would be forthcoming from the Committee. The Committee is engaged in formulating its recommendations and it is hoped that its efforts will bear fruit, in real assistance in the achievement of the Administrator's ideals of "housing as beautiful as it is efficient; as livable as it is low-cost."

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AT LARGE IN THE LIBRARY

THE AMERICAN PUBLIC LIBRARY BUILDING, *by Joseph L. Wheeler and Alfred M. Githens ($4.00, illustrated with photographs and plans — Charles Scribner's Sons, aided by Carnegie Corporation of New York by means of a grant through A.I.A.)*

It has become increasingly plain in recent years that libraries cannot perform their tasks with efficiency unless they are appropriately housed. Apart from its logic, this lesson has been driven home by numerous examples of buildings which reveal complete lack of suitable planning and which have proved to be serious liabilities to the authorities and staffs responsible for operating them. Until now, however, there has been nothing like a full treatment of the conditions and problems facing those charged with providing quarters for libraries. For one kind of institution this need is now met, after years of effort by two tireless compilers, with the appearance of Wheeler and Githens' THE AMERICAN PUBLIC LIBRARY BUILDING. The new publication pools the life-long experience of a leading librarian and an architect who has been highly successful with library buildings.

In the opinion of one librarian, at least, this book is to be looked upon and judged as an encyclopedia of recommended practice. Viewed so, it is a tool which no party to a public library building project may neglect without dereliction of duty. It will need to be a constant recourse, even though each of the groups it addresses will find in it much that is familiar and although few may care to read it *seriatim*. To governing bodies it offers the facts required for their numerous decisions, and, incidentally, an exposition of institutional aims. It provides librarians with an aid in formulating their administrative policies, and a check list for reference in outlining their building programs. For architects it furnishes the reasons and details of that "functional anatomy" which is indispensable to a successful structure. To some extent these values reach beyond the field.

The pervasive element in the book is the purpose of public libraries, to

(Continued on page 56)

MAKE THIS TEST — *Prove* BRIXMENT is BEST!

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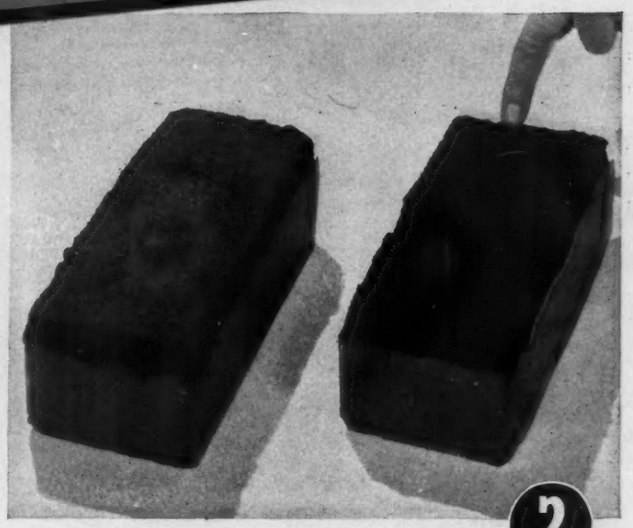

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(Continued from page 54)

which everything else is referred. The authors never lose sight of the main point and their treatment of the principles they bring to bear upon this is specific, without being meticulous. The weaknesses of the volume are on the safe side, i.e. of overdoing. From the practical standpoint the classification of plans by types is carried to refinement. It will justify itself if it renders easier the analysis and grasp of the various factors in floor layout which have been treated cursorily in the past. There is heavy repetition of precepts and examples throughout the book, and most particularly in the summary in Chapter Thirty-three; but the work is a reference tool, and its sundry bits of counsel need to appear wherever they are pertinent and will be caught in topical consultation. This reviewer wishes that the definitions affecting work-spaces in Chapters Seventeen and Eighteen might have been more clear-cut, and that in the treatment of service points there might have been more complete anticipation of arrangements for the relegation of mechanical activities and for reducing or superceding card catalogs.

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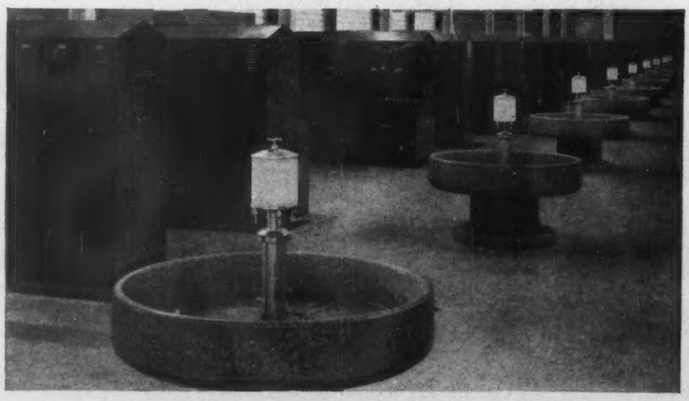


Bradley Washfountains in locker-shower room in new Foundry Employees' Service Building, Caterpillar Tractor Co., Peoria, Ill. Designed by Richard Belsterling and built by Fred Harbers' Sons, Contractor.

B.A.C. MEETING

The Boston Architectural Club held its Annual Meeting on Tuesday the 3rd of June, and before it came the combined Club and Atelier Dinner. *James Ford Clapp* [who died the same evening. Ed.] discoursed on *Professor (Harry) Gardner* of M.I.T who gave invaluable service as a former Club instructor and left a tradition that his friend *John F. Alter* has since carried on most successfully. Other speakers were Mr. Alter and *Chester Lindsay Churchill.*

Another flock of Lamb Prizes was awarded, to 1st, 2nd and 3rd year students who had done outstanding work. So we find *John Vahey* collecting as a pre-design man; *Beston Phinny* in the 2nd year; and 3rd year, *Ralph Le Blanc. Herbert Glassman* won the Special Student Scholarship to M.I.T. and *Kenneth Wilkie* fell heir to the Harvard Scholarship.

At the election of officers, *Clifford Allbright* became president, and Mr. Alter found himself re-elected vice president. *Carl S. Priestley,* having won his spurs as a treasurer in the A. L. of B., was elected to that office by the Club. The three directors are *Arcangelo Cascieri* (re-elected), *Charles G. Loring,* retiring as President, and *George McClellan.*

On May 22nd the Architectural League of Boston shed its old skin and as the integument rustled to earth the smiling face of *John H. Shea* was revealed as president, with *Bill Fopiano* backing up in the vice dept. Arranged on either side were Recording Secretary *H. M. L. Giduz,* Corresponding Secretary *Ed Clancy,* and Treasurer *Gordon Kunz.*

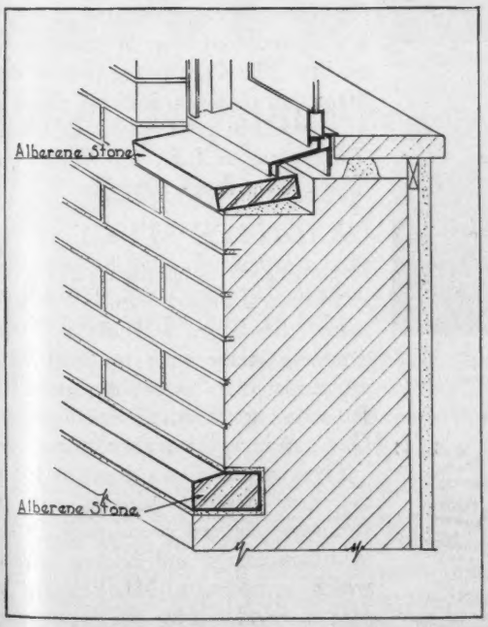
One report of the meeting says that after the induction a member looked down upon the valley and seeing cheerful lights in the Crawford House suggested adjournment thereto, only to be rebuffed by President Shea, as follows:

"Fellow member, you may or may not know that there is now showing in the Crawford House a young lady who is nightly set upon by trained pigeons and artfully denuded to the limit [union suit. Ed.] permitted by local statute. If that suggests anything at all it brings to mind the parable of the architect and the interloper, be he whomsoever fits the full, despicable meaning of the term [glaring fiercely to right and left over heads of the Architectural Leaguers].

(Continued on page 58)

Riverside Hospital, Tuberculosis Pavilion, North Brother Island, New York, N. Y., Electus D. Litchfield, Architect.

Sills, coping and trim of Alberene Stone are durable, colorful and economical



Detail showing 1¾" thick Slip Sill, and 2¼" thick Belt Course of Alberene Stone as used in Riverside Hospital. At circular sections, Sills carry through to form a band course. Alberene Stone used for roof and balcony copings, also.

Alberene Stone is ideal for exterior use because it is impervious to moisture; it does not chip, scale or split. Its natural light blue-grey tone harmonizes with practically any other colors. The fact that it can be cut into thin sections makes for definite economies. Used for sills, coping, spandrels, exterior or interior trim. Alberene Stone is free for all time of maintenance costs. As years pass it weathers to pleasing bluish and greenish tones with glints of yellow. Our Mills in Virginia are the largest in the country devoted to producing special purpose quarried stone. We are prepared to make deliveries *promptly* of stone in a color range of gray, dark gray, blue, blue-black, dark green and black, in various textures and finishes; and *prompt delivery is an important consideration in the present emergency.* Inquiries will receive immediate attention.

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(Continued from page 56)

"Once upon a time there were men of skills and technical dexterity whose blind spot was an inability to see the protective benefits of group action. They always thought that it was the other feller who was going to get termites in his wooden leg. And all the while a mess of interloping wise guys with a fixed purpose to make a dollar kept boring in and stealing their business. The general public didn't know any better and the technicians couldn't get together.

"Gentlemen, you see here in these miserable birds the selfsame interloping usurpation of another's rights, of your right and my right, and we as the lineal descendants of these technicians should not be party to its support. Let's go to Jake Wirth's."

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DESIGN RESEARCH

To make available for student research the works of early French, Italian, Spanish, and German masters of decorative design, despite Axis control of European museums, the Cooper Union Museum for the Arts of Decoration will remain open throughout the Summer.

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NEW YORK CHAPTER

Harvey Stevenson has been elected president of the New York Chapter, A.I.A., succeeding Frederick G. Frost. *J. Andre Fouilhoux* was chosen vice president of the Chapter, succeeding Mr. Stevenson. *Robert S. Hutchins* succeeds Frederick J. Woodbridge as secretary; *Henry Hofmeister* will again serve as treasurer; and *Don E. Hatch* was named to the post of recorder, formerly occupied by Mr. Hutchins. *Albert G. Clay* and *Otto Eggers*, as well as the new officers, become members of the executive committee.

Mr. Stevenson is chairman of the Civilian Protection Committee of the New York Chapter of the American Institute of Architects, and vice chairman of a similar committee of the New York State Association of Architects. He is also a member of the Architectural League and other architectural organizations. Mr. Stevenson, a resident of Croton-on-Hudson, is a member of Morris & O'Connor, Harvey Stevenson.

GREEK AID

We are advised by the *American Architects' Committee for War Relief in Greece*, on whose behalf we published an appeal last month, that funds are not being solicited at present due to the confusion in international credits. The Committee is now dormant but communications about its affairs will be received by *W. Stuart Thompson, A.I.A.*, 19 West 44th Street, New York City.

GRADUATE STUDY

Beginning in September, 1941, the architectural department of Pratt Institute, Brooklyn, will add a year of graduate study open to professional architects as a "refresher course" in the latest architectural developments, *C. C. Briggs*, Supervisor, announces.

Graduate students may major in the new defense subjects, such as structural air raid precautions, industrial camouflage and defense housing which, according to Mr. Briggs, "are sure to revolutionize the architecture of the future," or may specialize in the more established branches of the profession such as community planning, small residences, public buildings, interior architecture or landscape architecture.

A limited number of fellowships will be available to graduates of accredited architectural courses.

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COMPETITION ANNOUNCEMENTS AND RESULTS

PARIS PRIZE

Winners of the Special 1941 Paris Prize Competition, conducted by the Society of Beaux-Arts Architects, have been announced by *George A. Licht*, Chairman of the Paris Prize Committee. They are: First Medal and Prize—*G. Paulsen*, University of Illinois; First Medal Commended —*L. Woodard*, University of Illinois; First Medal—*F. C. Salmon*, University of Pennsylvania.

Second Meda'—*J. C. Tighe*, University of Pennsylvania; Second Medal—*J. C. Wheeler*, University of Pennsylvania; Second Medal—*A. B. White*, University of Pennsylvania; Second Medal—*S. Carter*, Syracuse University; Second Medal —*J. S. Nants, Jr.*, Princeton University.

In addition to the 3 First Medals and 5 Second Medals the jury, at the Judgment on June 17, awarded 12 Honorable Mentions. Thirty-six drawings were submitted by the competitors and the Schools and Ateliers represented were: Alabama Polytechnic Institute; Carnegie Institute of Technology; Georgia School of Technology; Miami University; New York University; Princeton University; Rensselaer Polytechnic Institute; Syracuse University; University of Illinois; University of Pennsylvania.

The subject of the competition was "A Plant for the Assembly of Motor Cars," and the prize accompanying the First Medal was $250. The members of the Jury were: *Mr. Licht*, Chairman; *Lt. Charles M. Ackley; Lewis G. Adams; Harvey Wiley Corbett; John W. Cross; William Adams Delano; Joseph H. Freedlander; Alexander P. Morgan; William E. Shepherd; Seth Talcott;* and *Lawrence Grant White.*

AMERICAN ACADEMY

The $1,000 Architecture prize of the American Academy in Rome has been awarded to *Donald L. Grieb*, Milwaukee, of the graduating class at the University of Illinois. He is 22 years old.

The final problem was "A Primary Training School for U. S. Army Corps Pilots," and there were 8 final competitors chosen from the preliminary competition entered by 65 competitors. Honorable Mentions went to *John C. Bonebrake*, Shaker Heights, Ohio, a senior at the Cleveland School of Architecture, Western Reserve University; and to *John W. Cole*, Syracuse, a senior at Syracuse University: Mentions going to *Joseph P. Ceruti*, Cleveland Heights, a graduate of the Cleveland School of Architecture, W. R. U.; and to *Milo D. Folley*, a graduate of Syracuse University and M.A. at University of Pennsylvania.

The Academy prize in Landscape Architecture was awarded to *Albert Russell Tryon*, Harrisburg, a graduate of Pennsylvania State College. He is 27 years old. Tryon was one of 4 final competitors and the landscape problem was "A Neighborhood Community."

The prizewinning drawings were exhibited early this month at the Architectural League of New York. The cash prizes of the American Academy in Rome were given this year without restrictions, as interna-

(Continued on page 62)

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(Continued from page 60)

tional conditions do not permit Fellows to go to Rome for study and creative work. Both Grieb and Tryon are eligible for selective service induction and they may not be able to carry out their plans for travel and study, but the grants may be used as they wish.

PENCIL POINTS PRIZES AWARDED

Awards in the recent Beaux-Arts Competition, "An Architectural School," conducted in Washington, D. C., and sponsored by *Professors Frederick V. Murphy* and *Thomas H. Locraft*, have been announced.

The prizes, given by PENCIL POINTS, went to A. W. Neumann, First, and to W. Eng, Second, both of the Department of Architecture, University of Illinois. In addition there were 7 First Mentioned Placed, 9 First Mentions, and 71 Mentions. There were 163 drawings submitted.

The architectural schools and ateliers participating were: Catholic University of America, Carnegie Institute of Technology, Cleveland School of Architecture, W.R.U.; Drexel Institute, Philadelphia; Georgia School of Technology, Kansas State College, New York University, Oklahoma Agricultural U. Mechanical College, Pennsylvania State College, Princeton University, University of Illinois, University of Kentucky, University of Notre Dame, University of Oklahoma, University of Pennsylvania, University of Virginia, Atelier Goudreau, Baltimore; T-Square Club of Philadelphia.

The Jurors were: *Francis Almirall, Julian Berla, William V. Cash, Norris Crandall, Cushing Daniel, Edward Donn, George Downs, Waldron Faulkner, Ralph Gulley, George Howe, A. Musgrave Hyde, Louis Justement, Arthur J. Kelsey, L. M. Leisenring, William Reed, E. C. Reubsam, Louis Simon, Delos Smith, Thomas Stathen, Frank Sullivan, Howard Sullivan, John Walker, Nathan C. Wyeth,* and *Edmund S. Campbell.*

MEDALS GIVEN

Awards of the 1941 Apartment House Medal of the New York Chapter, A.I.A., for the best apartment buildings erected within the five boroughs of New York City between October 1, 1938, and October 1, 1939, have been made to Castle Village and to the apartment house at 252 East 61st Street, in Manhattan, and to the Thorneycroft Homes, in Forest Hills.

Medals were presented to the architects of the winning buildings, *George F. Pelham, Jr., Horace Ginsbern,* and *Albert Mayer* by Frederick G. Frost, president of the New York Chapter, at the annual chapter luncheon, June 4, and the owners will receive certificates. They are Dr. Charles V. Paterno of Greenwich, Conn. (Castle Village); the 252 East 61st Street Corporation; and Thornewood Estates, Inc.

SCHWEINFURTH FUND

The Charles Frederick Schweinfurth Traveling Scholarship Fund for the Summer of 1941, to be used for study and research in Mexico and perhaps Guatemala, has been awarded to *Howard Bruce Cain*, 1494 Blossom Park, Lakewood, Ohio, it is announced by Dean Francis R. Bacon, of the School of Architecture of Western Reserve University.

Cain, a fourth-year student, is the

(Continued on page 64)

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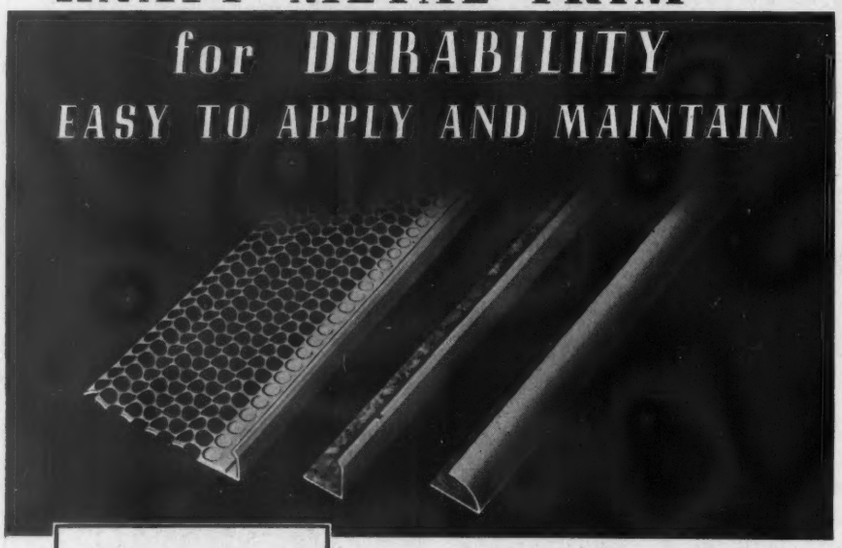

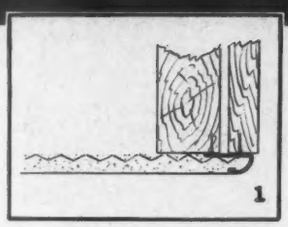

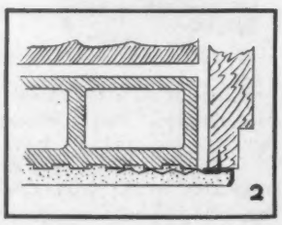

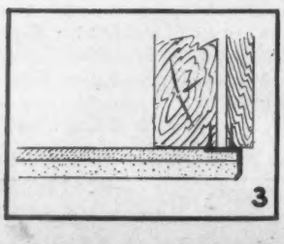

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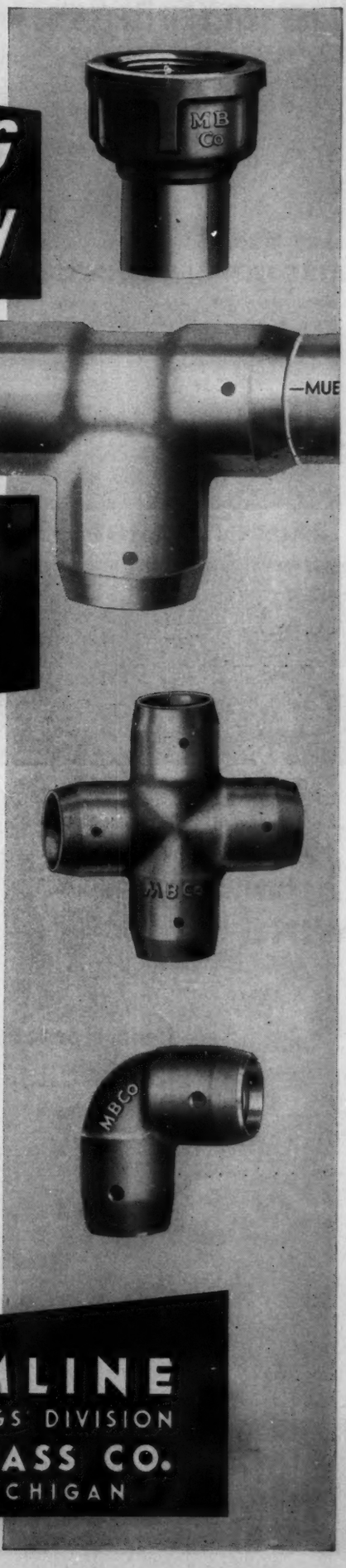

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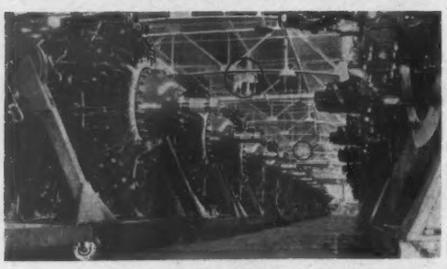

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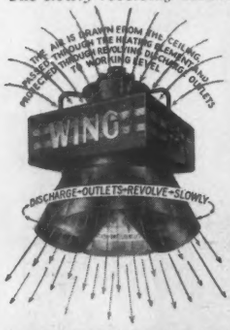
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(Continued from page 62)

son of Mr. and Mrs. Oscar Cain. His brother, Walker Cain, held the Schweinfurth Scholarship in 1937, when he went to Paris and worked in the Fontainebleau School. Now, having won the Rome Prize, he is studying on it in New York, not being able to go to Italy, and working in the office of McKim, Meade, & White.

BOOTH FELLOWSHIP

The Booth Traveling Fellowship Competition in the College of Architecture and Design at the University of Michigan was awarded on May 6 to *Arthur Witt Brewer* of Owosso, Michigan. Mr. Brewer is a graduate of the College, completing his work in June, 1940. During this past year Mr. Brewer has taken advanced work at the Cranbrook Academy.

The problem this year was "A Community House in a Medium Size City."

ROW HOUSING DESIGNS

Designs in a competition among forty architectural students at Cooper Union, for the "best low cost row housing project which could be built without government subsidy for approximately $5,000 a family," chosen as outstanding were those submitted by *Leo Kanter*, Bronx, fourth year night student, in the Art School; *Irwin Luckman*, Brooklyn, second year day student; and *Emmanuel Turano*, Brooklyn, fourth year night student.

The practical designing of privately owned row houses, visualized as the logical trend in the decentralization of large cities and of residential areas surrounding military objectives, was made the major problem of the year for upper class architectural students at Cooper Union. Detailed drawings and floor plans were submitted by each student after extensive research on new building materials, FHA standards of construction, and the financial limitations of the group to be housed.

WELDING AWARDS

The fifth annual award of the *Lincoln Medal* for an original contribution to the advancement and use of welding will be featured at the annual meeting of the *American Welding Society*, October 20 to 24 in Philadelphia. The Medal is do-

(Continued on page 66)

"I assure you, Madam, I'm quite capable of designing your house without continuous supervision."

(Continued from page 64)

nated by J. F. Lincoln, president of the Lincoln Electric Company, Cleveland.

Cash prizes totaling $700 also are offered by the *Resistance Welder Manufacturers Association,* 505 Arch Street, Philadelphia, in an open contest, until August 31, 1941, for technical papers on resistance welding. These prizes also will be awarded at the American Welding Society Convention.

MODERN PLASTICS

Modern Plastics Magazine is now sponsoring its *Sixth Annual Modern Plastics Competition.* Without fee, the sponsors of this annual competition invite all plastic-using firms, designers, molders, laminators, fabricators, materials suppliers, machinery and die makers to participate.

Any plastic object or product will be deemed eligible if it has been designed or has reached the market since September 1st, 1940. The competition and concurrent display of entries will be held in the main headquarters of Modern Plastics, Chanin Building, 122 East 42nd Street, New York City. The deadline for all entries is September 8.

As each entry is submitted it will be relegated to one of the following groups: 1. *Architecture;* 2. Business and Office Equipment; 3. Displays; 4. Furniture; 5. General Housewares; 6. Major Household Appliances; 7. Lighting; 8. *Industrial;* 9. Jewelry and Novelties; 10. *Military and Defense;* 11. Objects of Art; 12. Packaging and Closures; 13. Radios and Musical Instruments; 14. Scientific; 15. Sporting Goods, Games, and Toys; 16. Transport; 17. Wearing Apparel; 18. Miscellaneous.

★ ★ ★

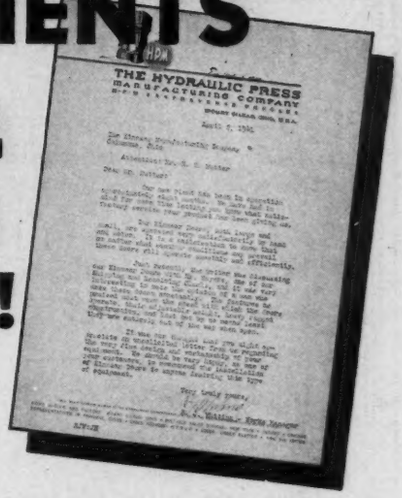
PERSONALS

MOORE & LLOYD, *Architects,* 2006 West Alabama; Houston, Texas, have dissolved partnership. Harvin Moore will continue practicing under his own name at the same address.

CHARLES IRWIN THIELE, *Architect,* has moved his office from 551 Main Street to 503 Third Street, Niagara Falls, N. Y.

CLARENCE WARREN DOLL, *Architect,* has opened an office for the practice of architecture in the Donnell Building, Mattoon, Illinois.

YOUR CLIENTS *will echo* WHAT THIS USER SAYS!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Handbook of Architectural Practice (Under revision—announcement later.)	$5.00
Manual of Accounting for Architects	5.00
The Autobiography of an Idea—*Louis H. Sullivan* (Reprint pending—announcement later.)	3.00
A System of Architectural Ornament—*Louis H. Sullivan*	15.00
Charleston, S. C. (Vol. I—Octagon Library of Early American Architecture)	20.00
Bertram Grosvenor Goodhue—Architect and Master of Many Arts	30.00

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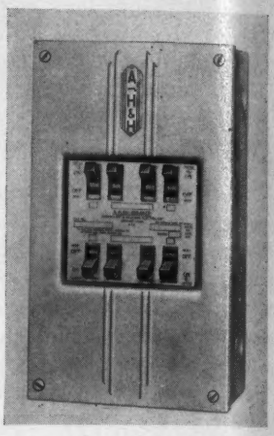
NEW PRODUCTS

NEW IMPROVED BREAKERS

A new line of improved flush and surface breakers has been announced by The Arrow-Hart & Hegeman Electric Co., Hartford, Conn. The listing is greatly simplified and a stock of only three sizes of boxes accommodates combinations of all CB, C-1, CBC type breaker units. A simple ordering plan provides for a minimum, flexible stock of units.



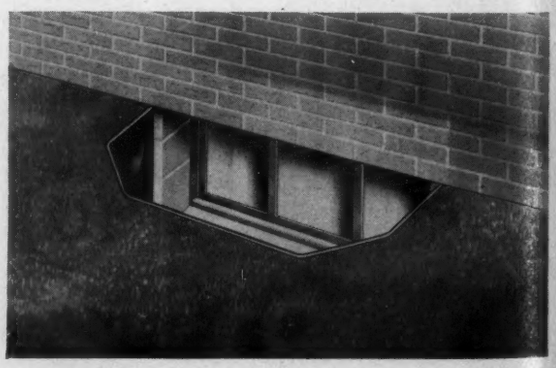
As breaker units may be easily ordered in parts, the boxes can be delivered when needed for roughing in. Breaker units are delivered later when the wiring is to be completed. This allows for last-minute changes in wiring plans, shows the considerable investment saving of approximately 15% and eliminates breakage, loss or extra handling expense.

Three different types are available, C-1, CB, CBC, all new; designed, developed and improved by Arrow-H&H incorporating six new features. Listed by the Underwriters' Laboratories, Inc. Special catalog 16-A describes this new, improved line of breakers.

NEW MAJESTIC WINDOW WELL

Announcement has just been made by the Majestic Company, Huntington, Ind., of a new, and rather revolutionary design of window well. It is made of heavy gauge steel and reinforced by a steel rod welded to the top edge. The smooth inside surface reflects the light, does not so readily streak with dirt and become unsightly. Likewise the fill around the well does not have a tendency to pull the well away from the foundation.

Another unique feature of the new window well is



the 20-year guarantee that it carries. A registration blank is attached to each well. If the owner of the premises signs and returns this registration form to the Majestic Company, he will have a guarantee of a replacement in case the well does not hold up for 20 years. The only provision in the guarantee is that it be painted according to good practice.

The Majestic window wells are offered in both the straight and round types and in all popular sizes. Also available are strongly constructed hinged gratings that can be used over the well when it is desired to make the basement window burglar-proof, or to prevent the accident hazard of a pitfall.

(Continued on page 67)

(Continued from page 66)

HERMAN NELSON ACQUIRES AUTOVENT FAN AND BLOWER

The Herman Nelson Corp., Moline, Ill., announces that it purchased on July 1st the entire assets and business of the Autovent Fan and Blower Co., Chicago, Ill.

The business will be operated as the Autovent Fan and Blower Division of the Herman Nelson Corp. The complete line of Autovent products will continue to be manufactured in the Autovent division in Chicago.

Included in the Autovent line are a complete range of sizes of centrifugal blowers from 6″ in diameter to 72″ in diameter in both forwardly and backwardly curved blade designs and a complete selection of propeller exhaust and ventilating fans from 12″ in diameter to 72″ in diameter.

NEW POST NEGATIVE PAPER

The Frederick Post Co., Chicago, Ill., announces the introduction of Post No. 226 Philm, a unique negative medium that assures identical duplications.

The waterproof treatment of Philm is said to keep negatives true-to-scale by preventing shrinkage or expansion. A glossy backing resists dust and dirt thus keeping negatives clean.

Philm is said to give maximum high results when used as a negative medium for ink drawings or pencil drawings that have ink-like detail and opacity. It is available in twenty-yard rolls, thirty-six, forty-two and fifty-four inches and also in ten-yard rolls of the same widths.

NEW LIGHTING AND POWER PHOTO-ELECTRIC RELAY

The United Cinephone Corp., Torrington, Conn., announces the introduction of the Sun-Switch, a new photo-electric relay for lighting and power.

The Sun-Switch is used to control electrical circuits in accordance with the rise and fall of natural illumination. The user chooses the two lighting levels at which he wishes the load switched on and off, and then adjusts the calibrated dials to the corresponding foot candle readings. Operation is entirely automatic, no resetting being necessary.

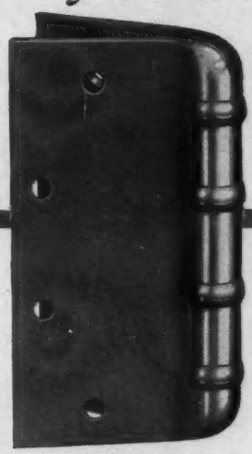
Sun-Switch is primarily designed as an aid to greater safety and economy in incandescent lighting applications. Important advantages result from using the device in this service, including: (1) Lighting will always be on when needed, regardless of when darkness comes— (2) Lighting will never be on when the presence of sufficient daylight makes it unnecessary — (3) No one need be made responsible for, nor take the time to do, the job of lighting up.

Sun-Switch automatic control may advantageously be applied to: aircraft beacons, airport lights, department and retail store lighting, factory lighting indoors and outdoors, schools, libraries, museums, hospitals, etc.

The housing of the Sun-Switch is weatherproof drawn metal, 10¾″ by 5⅜″ by 3½″. Door gasket is cork, and finish of box, aluminum. Hasp permits padlocking. The control conduit uses a type 921 photo-tube, having a life expectancy of 20,000 hours, and two type 6J5 tubes, having life expectancies of 5,000 hours. Operation is from 110 volts, 50 or 60 cycles, a.c.

(Continued on page 68)

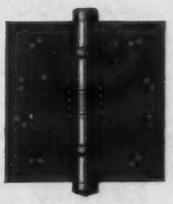
Whatever Your Specification ... Stanley Makes It



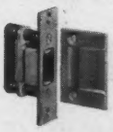
STANLEY
Hospital Hardware

These items are specially designed and made to meet the requirements of institutions for silent, positive door operation. Care is taken in the design to eliminate all projections for added safety.

Ball Bearing Butt Hinges. In wrought bronze, brass and steel for wood or metal doors.



Ball Bearing Friction Butt Hinges. For wood or metal doors.



Bronze Roller Latch with Rubber Roller.

Rubber Bumpers. For wood or metal stops.

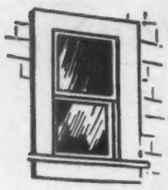
Roller Door Holders. Surface Type – Soft Rubber Roller.

Roller Door Holders. Mortise Type — Soft Rubber Roller.

AN AID TO YOUR SPECIFICATIONS

Stanley Catalog No. 61 will prove an invaluable aid in making up your specifications on building hardware. It shows the complete Stanley line, with full details. Write for your free copy. The Stanley Works, New Britain, Connecticut.

STANLEY
HARDWARE FOR CAREFREE DOORS



THE "eyes" of the house are the windows — the "ayes" of the majority of architects and builders vote for double sash hung with weight, pulley and Samson Spot Sash Cord. Dependable — permanent — no adjustments — little, if any, replacement cost. Samson Spot Sash Cord, identified by the Colored Spots (Reg. U. S. Pat. Off.), is the specification standard.

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How to make Country Kitchens "GO TO TOWN"!

Women today *expect* to find modern kitchens in new or remodelled homes. And in homes beyond the gas mains this means "Pyrofax" gas . . . for cooking—water heating—and refrigeration.

"Pyrofax" gas burns just like city gas—without soot, dirt or fumes. Broils and bakes perfectly—and *quickly*. Banishes the drudgery of handling and cleaning up after messy fuels. Ends service interruptions due to failure of power or elements. Economical to use, too, because there is *no waste*. And the supply of "Pyrofax" gas is always dependable—guaranteed in writing!

Send for *Don Graf's Data Sheets*. These authoritative specifications folders on "Pyrofax" Gas Service for homes beyond the gas mains are available. Write to Dept. B, "Pyrofax" Gas Division, Carbide and Carbon Chemicals Corporation, 30 E. 42nd St., New York, N. Y.

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SUPERIOR GAS SERVICE
COOKING • WATER HEATING
REFRIGERATION
BEYOND THE GAS MAINS

PRODUCT OF A UNIT OF UCC UNION CARBIDE AND CARBON CORPORATION

(Continued from page 67)

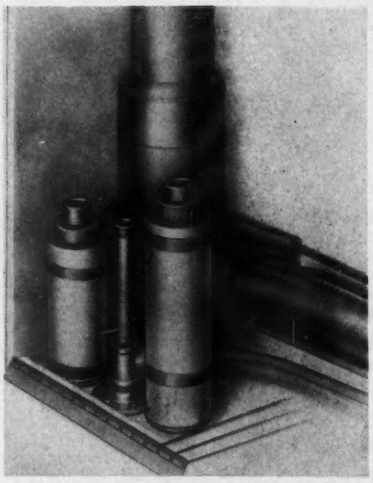
NEW TYPE AIR CONDITIONING SYSTEM

Development of a new type of air conditioning system, called the Conduit System, which, it is stated, will result in substantial savings in bringing air conditioning to the "man in the street," has just been announced by Dr. Willis H. Carrier, chairman of the board of the Carrier Corporation, Syracuse, N. Y.

The new year-round air conditioning system requires no more floor and wall space in buildings than steam pipes for a heating system. It has already been installed and proved successful in the Bankers' Health and Life Insurance Company Building at Macon, Ga.

Adapted primarily to apartments, hospitals, office buildings and other multi-room structures, the new method of air conditioning is made possible through the discharge of conditioned air at high velocities through a small conduit, instead of the large square ducts used with present air conditioning installations.

The Carrier Conduit Weathermaster System comprises heating, cooling, ventilating, cleaning, humidifying and air circulation equipment located in the basement or central apparatus room. This equipment draws in outside air and properly conditions it for cleanliness, ventilation and humidification. Standardized steel conduits distribute the air to the various rooms. The air is then discharged under pressure through induction nozzles which draw large amounts of room air over the heating and cooling coil located in the Room Weathermasters and diffuse it throughout the room.



One of the first obstacles to be surmounted was that of standardizing the connections to the unit. The new Conduit system utilized this feature which substantially reduces installation costs—by the provision for standardized equipment from the central station equipment to the units. The Conduit Weathermaster is composed of standard manufactured parts which results in a lowered cost of units, conduit and accessories. The Conduit is fabricated at the factory in standard sizes and requires only assembly in the field with a consequent reduction in installation costs.

Carrier Engineers have designed a "thinking" valve for use with the new Conduit Weathermaster to accommodate heating and cooling. For these purposes, hot or cold water is circulated through the system and the new control valve automatically determines how much hot or cold water must be circulated to maintain a constant temperature in the occupied space.

The new Conduit system, it is stated, saves from 85 to 95 per cent of the rentable space taken up by previous systems. The saving in building space and height has been found to amount to between 20 and 30 per cent of the installed cost of air conditioning.

Model cut-away section of Carrier Conduit System shows insulated pipes for hot and cold water and small drain pipe and, in rear, air supply conduit with front take-off to Room Weathermaster.

(Continued on page 69)

July 1941

(Continued from page 68)

NEW PNEUMATIC INSERTION THERMOSTATS

Two new additions to the line of pneumatic controls, the new Master and Submaster Insertion Thermostats, have just been announced by the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

The Submaster thermostat may be used to operate valves or dampers to control the temperature of air or liquids while the Master thermostat, measuring the temperature of some other medium such as outdoor air, automatically resets the control point of the Submaster thermostat as the outdoor temperature changes. In a hot water heating system, for example, the Submaster control, located in the hot water supply, may be set to raise the water temperature from 100° to 180°F. as the outdoor temperature, measured by the Master controller, drops from 60° to 0°F.

The sensitive rod and tube type of element permits accurate control over a wide range of temperatures. Both controllers have a scale range of –20° to 120°F. The Submaster controller may be adjusted to increase the control point 25° to 150°. The Master controller may be adjusted to produce the desired change in control point as the temperature of the outdoor air (or other medium) increases or decreases over a span of from 15° to 75°F.

NEW FAN FOR HEATING AND VENTILATING

A new fan designed primarily for heating, ventilating, and air-conditioning has been developed by B. F. Sturtevant Co., Hyde Park, Boston, Mass. Known as the Silentvane Design 8, this fan is said to possess two characteristics which particularly suit it to such duty—quietness of operation and low outlet velocity. Though made in Class I only, the new fan is ruggedly built to stand up under the most exacting heating, ventilating and air-conditioning duties. Housings are made of steel plate with strong rolled bead joints reinforced with heavy bracing angles. Side and back plates of rotor are cut from heavy stock and back plate is securely riveted to cast iron hub. Blades are die-formed, riveted to back plate, and welded to the shrouds. In accordance with N.A.F.M. standards for Class I fans, Design 8 Silentvanes are designed for a maximum tip speed of 9000 f.p.m.

The Design 8 also is said to possess the same desirable features which characterize other fans of the Silentvane line. These advantages include: (1) Reduced power consumption, (2) Lower maintenance cost, (3) Slow rotative and peripheral speeds — consequently longer life, (4) High efficiency over a large operating range. Mechanical efficiencies in excess of 70% are available over 48% of the performance range, and in excess of 75% over 35% of the performance range, (5) Self-limiting horsepower characteristic with gradually increasing horsepower and volume until the point of maximum efficiency is reached—then decreasing horsepower for larger volumes.

The Design 8 Silentvane Fan is available in all standard discharges, single and double width, single and double inlet, with wheel diameters ranging from 12¼" to 87¾".

FRONT and BACK

CRAWFORD CLOTHES

Here is a flooring so visually attractive, quieting and comfortable underfoot it is used in Crawford's new factory retail store—at headquarters. Here is a flooring so sensible and and economical it is used in Crawford's executive offices. Here is a flooring so practical, hard wearing and dustless that 150,000 square feet were used in Crawford's huge new Long Island City plant—where heavy wheeled racks are constantly rolled and dust must be avoided for miles of fabrics. In short, Kentile is the flooring you should use most everywhere—for the maximum in value, beauty, wear and practicality.

Architects, specifiers, builders—have you Kentile's box of samples in your file? Without any obligation, write for your set now. We'll also send you a grease-testing kit. Mail a postcard now to Dept. G.

KENTILE Asphalt Tile

DAVID E. KENNEDY, Inc.
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A special course combining the principal features of our two courses, Structural Design and Steel Detailing. You receive practically two complete courses for the price of one.
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By ELLIS AND SWANEY
It takes the bunk and mystery out of the subject and, instead, tells you, plainly, the principles, possibilities and simple working plans for starting this fascinating hobby. Shows how to grow plants in water, sand or cinders—how to build the simple equipment you need—complete directions for tending the plants—how to make your own nutrient solutions with a few cents worth of chemicals.
155 Pages, 60 Illustrations, $2.75
Reinhold Publishing Corp., 330 W. 42nd Street, New York

THE THRESHING FLOOR

A. M. ATKINSON, *Architect, of Tulsa, Oklahoma, addressed the letter below to J. Starke Hamilton, Jr., architectural student at Georgia Tech. and an able contributor to our section, "Critical Youth Wields The Flail." The issue referred to was for March, 1941.*

I am probably twice as old as you are and while I am far from being the "Arty" type of architect, I think I have an appreciation of things as they should be. I have many times wondered about the very thing which you say in your letter. My practice involves economics, engineering, politics, psychology, and even psychiatry, but it is still an Art.

It is a platitude to point out that a charming adaptation of a quaint European Farm House makes us feel the presence of these peasants in the same manner as a Liszt Rhapsody makes us feel the presence of the gypsy. That is Art.

That modern utilitarian architecture has not departed from this very thing, is easily seen in the same issue of PENCIL POINTS that contains your excellent letter. On page 147 we see a picture of the Airline Terminal with its background of decayed skyscrapers. On page 64 an advertiser has transplanted this building apparently to an airport where it means nothing and looks very much like an abandoned shed.

Returning to page 147, we see it in its proper environment expressing the very essence and feeling of transportation. You can hear the throbbing of motors, the roar of the subway, the hurried clamor of pedestrian traffic, and all the noisy silence of a great city. You can feel the circulating flow of people through it, you can sense the speed of the ships they will fly, and you can diagnose the impatient hysteria which required a newsreel to keep the customers from getting jittery.

If the architect has not sung a saga of the people in this case and every case of well-done functional architecture, then your point is well taken. Otherwise forget it!

You are still being taught to design palaces, monuments, mausoleums, and tombs, to develop in you a looseness of thinking; an ability to view from Jovian heights; an ability to think clearly in your planning; and as proof against the blindness which will not permit you to grasp an entire situation, because you look too closely at the utility of one detail.

You must learn to pipe people in and out of buildings, as the mechanical engineer pipes water in and out of a tank, but you must remember that you are piping people and not water. You must sense their feelings as they go in and out, you must feel their fatigue and their impatience, you must calm the impatient and hurry the fatigued. You must soothe the irate and guide the stupid. You must play on the mass of people, or a single person, like a conductor playing a symphony, or a demagogue haranguing a mob. There are many more architects who can design a successful tomb, than there are who can design a successful Hot Dog Stand:

Art is long and Time is fleeting;
Take it easy, Son, take it easy.

JAMES M. EARLY, *Architect of Ames, Iowa, was inspired to write to us after a second reading of Gilbert Raymond Golding's contribution to our April Threshing Floor.*

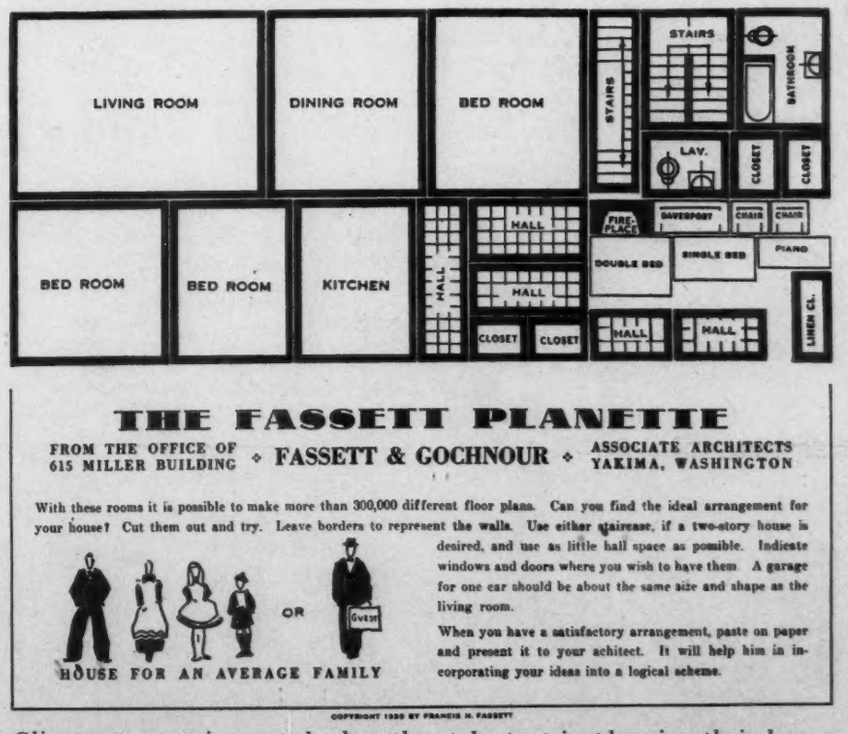
It would be presumptuous to declare that most of us were not (in the spirit) in accord with *Gilbert Raymond Golding,* the Denver draftsman. And while our hackles are up we would say something, but just what? For we know that as busy men in our work we have no time to lend for the unwanted task, and if we are not busy we have occasion for little to say.

As I sit here I have some more or less disjointed thougnts, some of which even in their disjointed state I am mindful to put on paper.

The general public is not using architects nor the services they are able to render for several reasons; two or three pertinent ones are that the public don't know how we work nor what we do. We are a minority group in the building business and being in the minority we are discounted by the material men and the building contractors.

We should be better publicised. Some years ago I contributed through the *Octagon House* to a national scheme for putting architects and their work before the building public. The material was good but it practically was all published in professional magazines, and John Q. Public didn't get it; for John Q. Public doesn't read the Professional Architectural Magazines.

Golding has hit upon a slogan, "Consult your Architect." The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DINING ROOM
BED ROOM
STAIRS
STAIRS
BATHROOM
LAV.
CLOSET
CLOSET
BED ROOM
BED ROOM
KITCHEN
HALL
HALL
HALL
CLOSET
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THE FASSETT PLANETTE
FROM THE OFFICE OF 615 MILLER BUILDING
FASSETT & GOCHNOUR
ASSOCIATE ARCHITECTS YAKIMA, WASHINGTON
With these rooms it is possible to make more than 300,000 different floor plans. Can you find the ideal arrangement for your house? Cut them out and try. Leave borders to represent the walls. Use either staircase, if a two-story house is desired, and use as little hall space as possible. Indicate windows and doors where you wish to have them. A garage for one car should be about the same size and shape as the living room.
When you have a satisfactory arrangement, paste on paper and present it to your achitect. It will help him in incorporating your ideas into a logical scheme.
OR
Guest
HOUSE FOR AN AVERAGE FAMILY
COPYRIGHT 1939 BY FRANCIS M. FASSETT

Clients are most interested when they take part in planning their home, believe the Architects who devised the cardboard cut-outs shown above

American Radiator Co. expresses it a little differently: "Trust your Architect." The *U. S. Gypsum Co.* makes its contribution, "You need an Architect." Golding's slogan coupled with the others would make handsome reading if it didn't grind out too long. "You need an Architect, consult yours, then trust him."

Material men and contractors are inclined to discredit the architects. In the first place architects do not buy building materials and contractors do; hence the cooperation between the material men and the contractors. In the second place contractors have an obsession against being supervised in either the materials furnished or in workmanship performed. In other words the contractor is in the running when he controls the gage; his opportunity to make more on the job is within his own hands.

The FHA could be of greater National worth if it insisted upon competent architectural services in connection with the mortgage insurance and building inspection they undertake. In this the FHA could be a law within itself, to the candid betterment of American homes built under federal administration.

Ever-seeking the "perfect definition" of architectural terms and ideals, those seriously concerned with the æsthetics of design will want to read this brief essay on Character, by WALTER D. BLAIR, *F.A.I.A., of New York.*

Character in architecture is a visible expression of the various purposes which buildings serve. Its realization is attained by regard both to the functional activities that the building houses and to the spiritual, aesthetic and emotional needs attendant upon these activities.

Different spatial requirements of mass and varying fenestration accompany each type of architectural problem and when concordance is established between need and expression, this concordance becomes a recognized and expected expression of spatial relationships which constitutes character. Appropriate forms, appropriate scale, appropriate materials used in accord with their properties are factors in character. Appropriateness here means suitable for the physical and emotional requirements of the building. Character in architecture is, as in man, the outward expression of inner content.

* * *

PERSONALS

HENRY H. SAYLOR, *Architect,* has opened an office for the practice of architecture at 52 Vanderbilt Avenue, New York, N. Y.

L. MORGAN YOST, *Architect,* has moved his office to 363 Ridge Road, Kenilworth, Illinois.

JULIAN E. BERLA, *Architect,* has moved his offices to 1636 Connecticut Avenue, Washington, D. C., where he will continue consulting and general practice.

C. HARDY OLIVER, *Architect,* has moved his office to 1208 Washington Street, First National Bank Building, Columbia, South Carolina.

OLLIVIER J. VINOUR, *Architect,* of Augusta, Ga., has been appointed *Chief Architect* in charge of Site Planning and Buildings by McCrary Corporation, Architects and Engineers for Augusta Triangular Division, a $24,000,000 Army Program.

SISALKRAFT . . . *built to give protection for the life of the building*

Miles of wire-tough sisal fibres reenforce this unusual paper—give it the strength needed for rapid installation—guard against tears, punctures or cracks that would defeat the very purpose of building paper. These fibres are embedded in two layers of plastic asphalt, protected by two sheets of strong kraft treated to resist shrinkage and dry rot. Years of experiment and research have gone into the development of SISALKRAFT. It's "engineered" to do its job well — recognized as the BEST to be had.

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SISALKRAFT goes on fast, with little patching or piecing, with fewer nails and no battens. Saves labor and material—gives you *better* construction at no greater *applied* cost than light, flimsy building papers.

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NEW YORK SAN FRANCISCO

SISALKRAFT
THE ONE Best BUILDING PAPER

World's Largest Porcelain Enamel Mural on Youngstown Sheets, now Installed in Cleveland Terminal Concourse

The visitor to Cleveland's Terminal Building now sees this gorgeously colored mural, executed by the Ferro Enamel Corporation in porcelain enamel on Youngstown Enameling Sheets for the New York World's Fair.

Flatness - a very necessary quality in any application of this character is an inherent quality of Youngstown Enameling Sheets. In this vast expanse of porcelain, executed in rich reds, blues and shades of yellow, ochre and orange, the same virtues are pre-eminent that make these sheets so suitable for the manufacture of ranges, refrigerators, washers, cabinets, pots and pans.

Youngstown Enameling Sheets are free of internal strains and impurities, with a uniformity of surface and gauge which makes possible a flawless, glass-smooth porcelain finish, ripple-free and buckle-free, that does not blister or craze or deteriorate through years of service.

THE YOUNGSTOWN SHEET AND TUBE COMPANY
General Offices - Youngstown, Ohio

YOUNGSTOWN

Manufacturers of Carbon, Alloy and Yoloy Steels

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6-15D

Largest piece ever executed in porcelain enamel, this giant mural is 72 x 32 ft., approximately the size of a tennis court. It depicts "Man's Struggle Against the Elements" - snow, frost, sun, wind, lightning and floods. Several new panels have been added to fit the mural to the new location in the Cleveland Terminal Concourse.

PANAMA PANORAMA

Now it can be told . . . and sold. For about six months last year two bright lads of the Canal Zone Architect's office, *Clark Teegarden* and *Fred Herman,* devoted practically all their spare time evenings, Sundays and holidays to the production of a pictorial map of Panama. This involved no end of research as well as careful drafting as they are of "it's worth doing well if it's worth doing at all" school of thought. The net result is something the boys may well be proud of. Moreover, their beautiful water colour drawing has been perfectly reproduced in full color by lithographers in the States—so perfectly you can almost feel the sediment washes. Besides being a thing of beauty it is painstakingly accurate.

Our Benedict No. 1 for the fiscal period is *Meade Bolton,* architectural tycoon of the Panama Canal. *Panama Pete* joins Meade's many friends on the Isthmus and in the States in hearty congratulations. Buena suerte todos los dias, Don Meade!

I noticed with interest a recent article on radio publicity by *William Lescaze* and it recalled my one and only association with him 15 years ago. He was fooling around, after hours, with the competition for the Palace of the League of Nations, and was soliciting assistance from all available sources. It is difficult now to realize that the League was taken seriously enough just 15 years ago to warrant an international competition for the design of its Palace! I recall the many nocturnal hours I spent niggering on the Lescaze submission—hours that grew longer and later as the shipping date drew closer and closer. Ironically, it was a very good friend, an architect from Munich, who introduced us and was influential in my joining the niggering force. I wonder how he is faring now, that German. He was the first to open my eyes to the beauties of modern design.

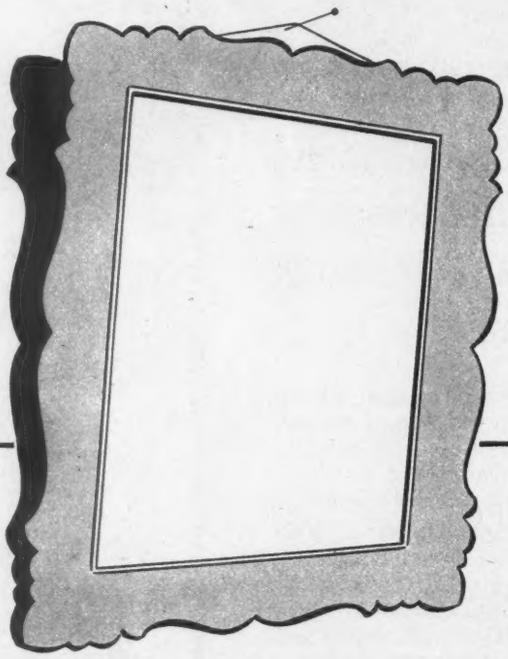
Leo Page, assistant architectural tycoon of the Panama Canal, is enjoying extensive leave in the States after a couple of hectic years here with everything going ahead at once and under pressure. He is escaping Panama's worst season, when the weather can't make up its mind whether to be wet or dry.

Small World Dept.: At the last meeting of the Architect's Disorganization we were privileged to have with us *Richard W. Alger, A.I.A.,* who is down here looking after Uncle Sam's interests in the building of the new legation, located in the Bella Vista section of Panama near the site selected for the proposed new *presidencia,* which will be an impressive Palace for the President of Panama. Here Mr. Alger ran into his old T.V.A. buddy, *Hayward Shacklett.* It also seems that Mr. Alger is the Alger of *Marye, Alger & Vinour,* of Atlanta, and that Vinour was the critic of *Inocencio Galindo,* prominent Panamanian architect, when he attended Georgia Tech.

Panama Postscript: Our office just received a new shipment of personnel, which turned out to be *John Suydam,* fresh from postgraduate work at Penn State . . . the lure of the tropics, you know. Hasta luego! PANAMA PETE

"In spite of the increase of $219 between last year and now in the average cost of the one-family home being built, we still find that the average new home costs less than $4,000. Quite definitely, it is the small home which is the backbone of the building now going on."

Fermor S. Cannon
U. S. Savings and Loan League



Portrait of an erasure on ARKWRIGHT TRACING CLOTH

See it? You can't – no matter how hard you look! For smooth, highly transparent Arkwright Tracing Cloths have a special finish that takes erasures perfectly, without "ghosting". Pencil marks come off cleanly and quickly – erased areas will take ink without feathering or letting ink chip off when it dries. That means easier work for every draftsman – and neater, "snappier" blueprints.

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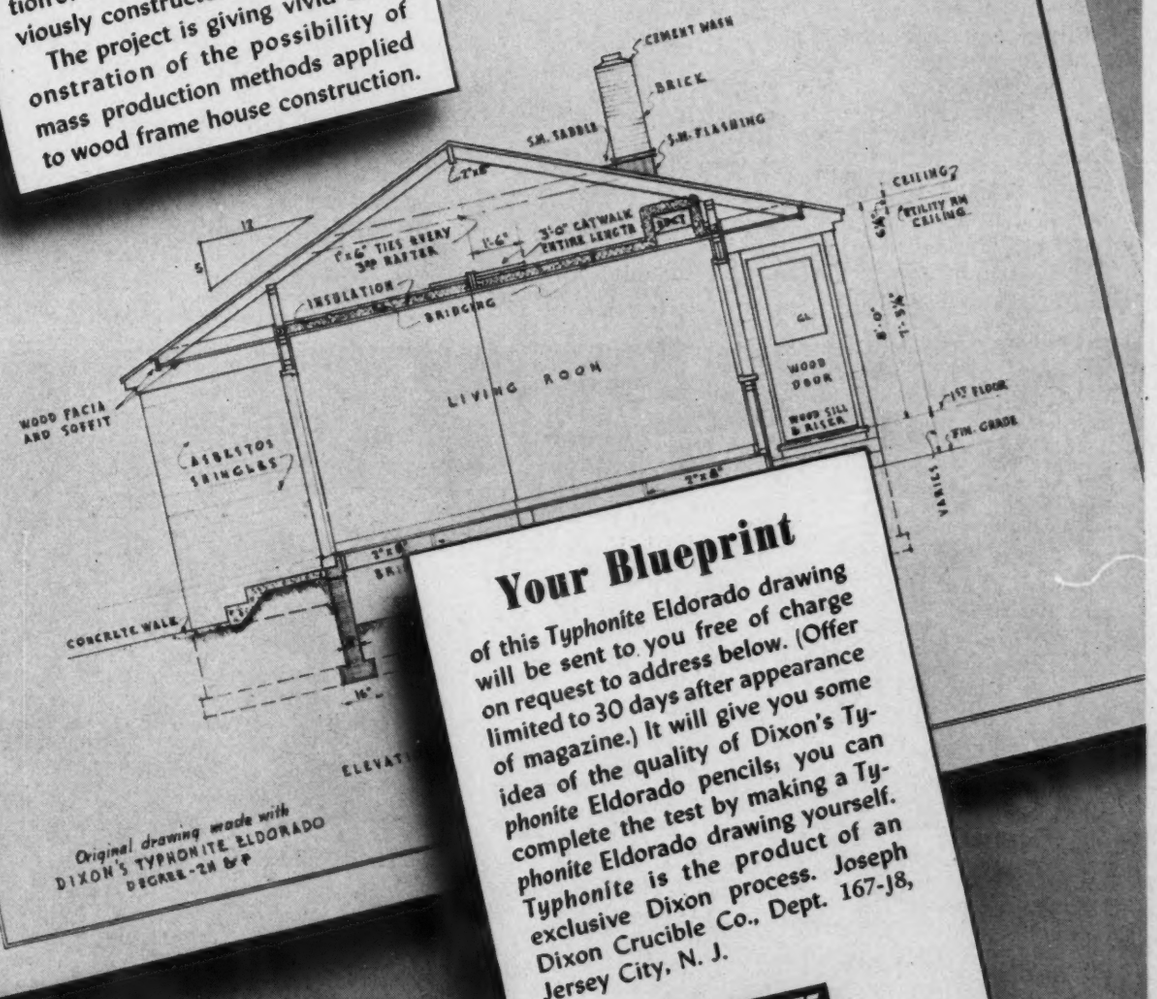
PREFABRICATION

is the novel feature of the 500-family Audubon Village (New Jersey) defense housing project sponsored by the Federal Works Agency. Panel sections and partitions were jig fabricated in an assembly shop near the site and made possible the erection of twenty houses a day on previously constructed foundations.

The project is giving vivid demonstration of the possibility of mass production methods applied to wood frame house construction.



Your Blueprint

of this Typhonite Eldorado drawing will be sent to you free of charge on request to address below. (Offer limited to 30 days after appearance of magazine.) It will give you some idea of the quality of Dixon's Typhonite Eldorado pencils; you can complete the test by making a Typhonite Eldorado drawing yourself. Typhonite is the product of an exclusive Dixon process. Joseph Dixon Crucible Co., Dept. 167-J8, Jersey City, N. J.

made in U.S.A. DIXON'S ELDORADO·· HB

HERE, THERE, THIS & THAT

POTOMAC PATTER

We sincerely hope that our newly-acquired architectural gentry can take it—so far as our weather is concerned. For this hot, humid and humiliating season is one of our dampest and most grievous in years. There was a time when climatic conditions dictated the usefulness of Government employees, i.e., it was determined that up to a certain temperature (barometric conditions didn't count) 96° Fahrenheit a person could work with more or less efficiency but above that they might as well go home. Furthermore, one heatstroke case might throw the entire unit into panic and so we remember being dismissed early time and again—summer after summer. Yes sir, our 15-cent golf courses had banner seasons! Today, we carry on, heat or no heat, and if the linen gets a little damp and the starch comes out and the quarter-scale indication measures at 3/8 inches to the foot—so what? What is to be built will be built—and one inch or one foot more or less doesn't matter.

Because we can't get around so much these days (spies, you know), we are unable to report on newcomers to your Uncle Sam's architectural staff in all places, but close at hand we find Maritime's architectural and interior decorating staff augmented by *Eli Rabineau, Milton Schulgasser* and *Vince Buckner,* of New York, and *Harold Wescott,* of Milwaukee, Wisconsin. Vince had been over in Procurement looking after furniture for your public buildings—now he is looking under furniture for ships.

Sounds silly? Not so, my hearties, for recently some of Maritime's passenger liners have been taken over for National Defense—luxurious public spaces and their furnishings are taboo. Naturally architectural interior work has been cut down in that department but most of the lads there are sufficiently trained to step over into the Hull Department and make themselves more than useful. However, the "stylists" are still busy with what should prove the finest passenger-cargo ships built in America to date. We refer to the recently-launched American South African liners.

Certain of our local private practitioners are still very busy and without meaning to start a stampede or "bold rush" to this busy town (we're overcrowded now) there are a few but good jobs open. If any reader is interested, it would please us to give him the right dope on who wants who for how long and for what. Drop us a postcard, in care of P.P.

(Continued on page 50)

More than 100 products and renderings representing products created by members of the Chicago Society of Industrial Designers have been on display in the members' summer exhibition at the Art Center in Chicago. The display facilities of the Art Center permit a complete change of shows every third week throughout the year—ranging from packaging and commercial illustrations to major industrial design. Of special interest is the Visual Reference room, where there is a permanent display of the work of artists, photographers, art studios, and paper houses, binders, photo-engravers, lithographers and plastic manufacturers. Photo by Underwood & Underwood

General Electric Office and Warehouse Building, Los Angeles, Calif.—Architect: Albert C. Martin

IT HAS TONCAN IRON ARTERIES FOR HEATING AND VENTILATING

In this West Coast office and warehouse building, there's more than beauty that appeals to its owners. It's designed and built with long-lasting protection against costly maintenance and premature replacement of its heating and ventilating duct work —with rust and corrosion-resisting Toncan* Iron.

There's every reason why *you* should specify Toncan Copper-Molybdenum Iron on jobs like this, too. Containing twice as much copper as copper-bearing steel, it has greater rust- and corrosion-resistance than any material in its price class. It gives years of longer service without maintenance—puts an end to premature replacement costs that mean double expense, for tearing out the old duct work, for putting in the new. And Toncan Iron is uniformly ductile, easier to work—saving on building costs.

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Get the up-to-date facts about Toncan Iron, its features, applications and other data contained in the new booklet "A Few Facts About Toncan Iron for Architects and Engineers." Drop us a line. In the meantime, see Sweet's 13/6.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

CORBIN HARDWARE FOR COMMERCIAL ENTRANCES.—New brochure listing and illustrating a complete line of entrance trim for use on every kind of commercial job. Included is an entirely new line of push bars and door pulls designed for modern competitive trade, also new thresholds, armored front locks and all the other important items necessary for this type of work. 36 pp. 8½ x 11. P. & F. Corbin, American Hardware Corp., Successor, New Britain, Conn.

ARCHITECTS' HANDBOOK FOR RESILIENT TILE FLOORS.—New reference book presenting all the technical data needed about resilient type floor. It also compares, without bias, cork, asphalt and rubber tile plus various cove bases. Included are cost comparison charts, lists of "do's" and "don't's," proper underfloors, sizes and color lists, possible designs, inserts available, etc. 32 pp. David E. Kennedy, Inc., 58 Second Ave., Brooklyn, N. Y.

KOHLER K41 CATALOG.—A new book covering the complete line of Kohler plumbing fixtures and fittings designated as Catalog K-41. Among new products shown are the Times Square bath, the Marston corner shelf lavatory with built-in fittings, several new sinks especially for small homes and apartments, the Triton bath-shower mixer without valves, and other shower and shampoo fittings. A number of bathrooms, powder rooms and modern kitchen arrangements in various price ranges are illustrated from direct color photographs and there are suggestions for floor plans and for decoration. Photographs, phantoms, drawings, and other devices have been extensively employed to show products and features. Illustrated also are production facilities, processes, inspections and tests; and the character and home life of the production workers is the theme of a series of color pictures of Kohler village. Cloth bound, 144 pp. 8¾ x 11¼. Kohler Co., Kohler, Wis.

PITTSBURGH STEELTEX PLASTER SPECIFICATIONS.—A.I.A. File No. 20-b-1. Looseleaf catalog DS-130 for architects and specification writers dealing with the subject of Steeltex for interior plastered walls and ceilings, presents specifications, descriptive data, application directions, construction details, test data, etc. 32 pp. 8½ x 11. Pittsburgh Steel Co., Construction Products Div., Pittsburgh, Pa.

Published by the same firm, "Pittsburgh Steeltex Floor Lath and Welded Wire Reinforcement." A.I.A. File No. 4-e-25, 20-b-1. Catalog DS-133 covering Pittsburgh Steeltex floor lath, a combined reinforcing and form for light concrete or gypsum floors and roofs of 2 in. to 3½ in. slabs. Descriptive and specification data, loading table, test data, etc. Included is descriptive information on Pittsburgh welded wire reinforcement. 16 pp. 8½ x 11.

BRADLEY WASHFOUNTAINS AND MULTI-STALL SHOWERS ON THE JOB.—New booklet consisting entirely of pictures with brief explanatory legends. There are washroom installation views in plants of all kinds, in schools, camps, institutions, all revealing the many advantages of group washing. 24 pp. Bradley Washfountain Co., 2203 West Michigan St., Milwaukee, Wis.

SPENCER JACKETED "C" STOKER AND OIL BURNING BOILERS.—Set of two catalogs describing the design and construction of the Spencer C series of steel tubular stoker and oil boilers for home heating and automatic domestic hot water. Capacities and dimensions. 8½ x 11. Spencer Heaters, Williamsport, Pa.

PHILCO-YORK SINGLE-UNIT AIR CONDITIONERS.—Booklet describing and illustrating several models of single-unit air conditioners for individual rooms, in homes, apartments, offices, hotels and hospitals. 12 pp. Philco Radio & Television Corp., A Division of Philco Corp., Philadelphia, Pa.

(*Continued on page 44*)

THOSE FEET DEMAND A CORRIDOR SPECIFICATION THAT PROVIDES:

Maximum Durability
Maximum Sound-deadening
Maximum Sanitation
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FOR SAFE, SANITARY, SOUND-DEADENING SCHOOL FLOORS SPECIFY LONG-LASTING, COLORFUL NAIRN LINOLEUM

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LINOLEUM
Floors and Walls

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(*Continued from page 42*)

SPECIFICATIONS FOR FRIGIDAIRE APPLIANCES. — Architect's file folder containing specifications and detailed information on the construction, performance and features of Frigidaire refrigerators and electric ranges. 9½ x 11¾. Frigidaire Division of General Motors Sales Corp., Dayton, O.

ANCHOR POST PROTECTIVE FENCES.—New catalog No. 110, dealing with the subject of protective fences of the chain link type shows fourteen different models in various settings such as industrial plants, schools, estates, cemeteries, golf courses, and other locations throughout the United States. Composite table gives pertinent information about all types and makes it easy to find. Structural details are shown by simple line drawings. 40 pp. Anchor Post Fence Co., Baltimore, Md.

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it's that new speed-'em-up pencil cloth made in a new way to be a worthy companion to Micro-Weave Tracing Cloth. It is made to take pencil perfectly and to ink up without loss of the erasable, clean line qualities which characterize Micro-Weave. We have never believed the working qualities of a drafting material could be described in an advertisement — it must prove itself in the drafting room. Will you give Micro-Weave Pencil Cloth that opportunity? Samples promptly on request. Ask your dealer for Micro-Weave Pencil Cloth.

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PELLA WINDOWS.—A.I.A. File No. 35-p-1. Architects' file folder containing series of detail plates covering Pella casements. Details include various types of brick veneer, masonry and frame wall construction; joining, angular and corner mullions; angular bays, transom bar, elevation sheets and complete specifications. 9¾ x 11⅞. Rolscreen Co., Pella, Iowa.

STANDARD SPECIFICATIONS ON THE USE AND APPLICATION OF SHELLAC.—Architects' file folder containing complete specification data on the use and application of shellac as approved by The American Bleached Shellac Mfrs. Assn. Specifications cover both floor finishing and interior woodwork. 8½ x 11. The Shellac Information Bureau, 70 Pine St., New York N. Y.

K & M SPRAYED LIMPET ASBESTOS.—A.I.A. File No. 39-b. Reference manual giving complete descriptive and specification data covering K & M sprayed Limpet asbestos, an acoustical material which is sprayed on the surface of ceilings and walls. Series of color plates show decorative possibilities of this material when tinted. 16 pp. 8½ x 11. Keasbey & Mattison Co., Ambler, Pa.

TRANE COOLING COILS.—A.I.A. File No. 30-f-4. Bulletin DS-365. New catalog covering a complete line of cooling coils, including coils for water cooling and for cooling applications where direct expansion refrigerants are used. Included are specifications, selection data, roughing-in dimensions, capacities, piping details, etc. 68 pp. 8½ x 11. The Trane Co., La Crosse, Wis.

FITZGIBBONS STEEL BOILERS.—Set of four folders describing the design and construction features of the Fitzgibbons line of steel boilers for residences, both large and small, also suitable for any kind of automatic firing as well as hand firing, and adapted to any accepted heating system. 8½ x 11. Fitzgibbons Boiler Co., Inc., 101 Park Ave., New York, N. Y.

THE MAGIC OF DECORATIVE INSULATION.—Brochure devoted to the subject of insulating board, shows by means of color plates, just a few of the many ways it is being used today in living rooms, dining rooms, bedrooms and recreation rooms of distinction. 8 pp. 8½ x 11. Insulation Board Institute, 111 West Washington St., Chicago, Ill.

(*Continued on page 46*)

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It forms smooth, flawless concrete surfaces at lower cost!

● When you're designing structures with exposed concrete surfaces, specify that the concrete be formed against Plyform, the grade of Douglas Fir Plywood made especially for concrete form work.

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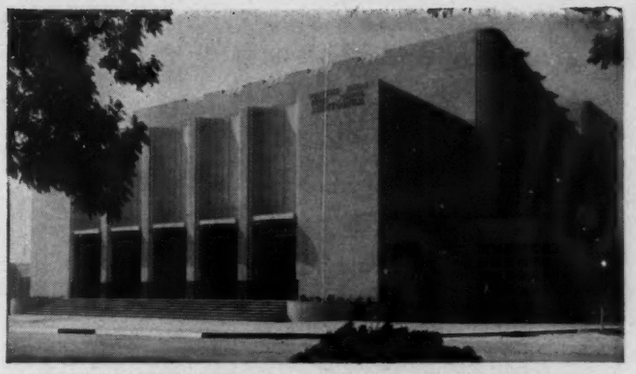

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EVEN THE BACK LOOKS GOOD! This rear view of the Whittier Union High School is strikingly beautiful, too . . . proving that when Plyform is used, all surfaces can be flawless. Wm. H. Harrison was the architect for this school; J. K. Thomas, the contractor.

FOR MAXIMUM RE-USES! The concrete in this filter station of the Metropolitan Water District in San Dimas, Calif., is being formed against the exterior type of Plyform because maximum re-uses were desired. EXT-DFPA Concrete Form Panels have proven they can be re-used as many as 50 times—give truly economical performance.

"Smooth as concrete formed against Plyform"

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(*Continued from page 44*)

BATES GRATES.—A.I.A. File No. 14-p-21. Catalog No. 937 describing the construction of the Batesteel line of floor grating, stair treads, floor armor and bridge decking. Specifications and table of safe loads are included. 12 pp. 8½ x 11. Walter Bates Co., 208 S. La Salle St., Chicago, Ill.

JEFFERSON ELECTRIC BALLASTS FOR FLUORESCENT LAMPS.—Bulletin No. 411-FL contains detailed information and illustrations of a complete line of ballasts, with data and dimensions for all ballasts from 4- to 100-watt capacities. Wiring diagrams are included together with a table of comparative mounting dimensions, also description and data on capacitators and manual-type fluorescent lamp switches. 12 pp. 8½ x 11. Jefferson Electric Co., Bellwood, Ill.

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CARRIER AIR CONDITIONING — REFRIGERATION — HEATING.—A condensed catalog of Carrier air conditioning, refrigeration and unit heating equipment for industrial uses, ranging from the room ventilator handling a few hundred cubic feet of air per minute to 1100-ton centrifugal refrigerating machines. It illustrates and describes all types of equipment used for industrial applications. The booklet is divided into four sections, to facilitate easy reference. Temperature and humidity control equipment comprises the first classification, while the second and third groupings list refrigeration and heating equipment. The fourth section lists special application equipment, including dehydration, locker storage, smoke houses, heat interchangers, non-freeze coil and commercial refrigeration equipment. 16 pp. 8½ x 11. Carrier Corp., South Geddes St., Syracuse, N. Y.

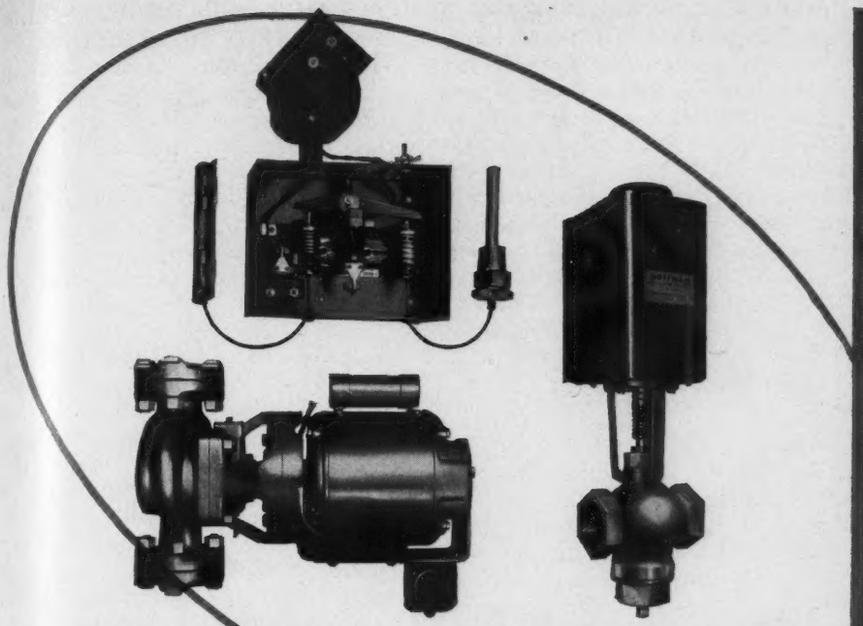
SUNCHEK FABRIC VENETIAN BLINDS. — Profusely illustrated brochure describing the advantages and construction of a line of Venetial blinds equipped with fabric slats for use in homes, hospitals, schools and other public buildings. Included are measuring instructions and series of ordering charts. 20 pp. 8½ x 11. The Western Shade Cloth Co., Twenty-second and Jefferson Sts., Chicago, Ill.

HALL MACK BATHROOM ACCESSORIES AND MEDICINE CABINETS.—Catalog No. 42 illustrates and describes a complete line of bathroom accessories and seamless medicine cabinets, including the new Coronado line of accessories for low cost homes. 34 pp. 8½ x 11. Hallenscheid & McDonald, 15 Lombard St., Philadelphia, Pa.

THE STEEL CONSTRUCTOR.—Issue No. 3 of this publication for July devoted to subject of structural steel in defense construction, illustrates and briefly describes a number of recently-built airplane plants and hangars. 16 pp. 8½ x 11. American Institute of Steel Construction, 101 Park Ave., New York, N. Y.

GARY GRATING AND TREADS.—A.I.A. File No. 14-p-21. Catalog describing the Gary line of copper-quad, welded and riveted gratings and stair treads. Included are table of safe loads and other useful engineering data. 12 pp. 8½ x 11. Standard Steel Spring Co., Open Steel Floor Grating Div., Gary, Ind.

(*Continued on page 48*)



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For the first time, *positive, automatic modulation of the heat supply to match any and all weather conditions!* An outside control, in conjunction with a bulb in the hot water line, *automatically* selects the water temperature necessary to keep the house at any predetermined degree. For new or modernized residences, apartments and factories, Hoffman Hot Water Controlled Heat offers an entirely new standard of comfort and convenience. It provides accurate control of zoned installations, assuring a distribution of heat in direct relation to either personal temperature preference or to the functional activities of the building.

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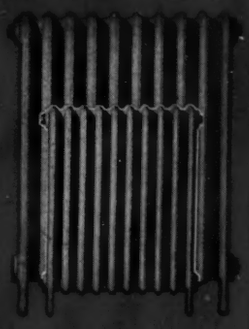

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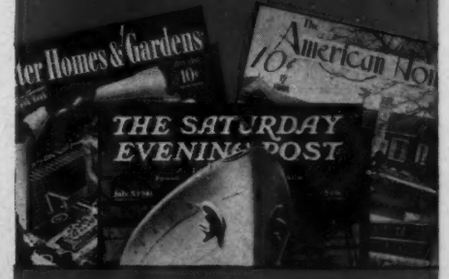

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Hot Water

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 46)

WOODCO WINDOW UNITS.—A.I.A. File No. 19-e-1. Folder with descriptive data and installation details covering the Woodco line of factory assembled window units equipped with patented Row spring cushion metal guides. 4 pp. 8½ x 11. General Woodcraft Co., Inc., North Bergen, N. J.

Published by the same firm, "Woodco Mitertrim." A.I.A. File No. 19-e-3. Folder describing Woodco Mitertrim, a prefitted, moisture-resisting treated and paper wrapped window and door trim of No. 1W pine with Colonial design casing and a positive lock mitre joint.

DUR-O-WAL.—A.I.A. File No. 10-C. Folder with descriptive data and installation details covering a new type of steel member for reinforcing masonry walls. 4 pp. 8½ x 11. Cedar Rapids Block Co., Cedar Rapids, Iowa.

MODERN DEVELOPMENTS IN REINFORCED CONCRETE. — New brochure, dealing with the subject of reinforced concrete, contains the following articles of interest to architects and engineers: "150-ft. Rigid Frames Solve Hangar Roof Problems"; "Moment Redistribution in Reinforced Concrete"; "Hollow Type Concrete Construction in Bridges"; "20-In. Column Designed for 1,000,000 Lb. Load." 16 pp. 8½ x 11. Portland Cement Assn., 33 West Grand Ave., Chicago, Ill.

GRID BLAST COILS.—A.I.A. File No. 39-d-14. Catalog describing and illustrating the Grid line of blast coils for heating industrial plants. Engineering data. 20 pp. 8½ x 11. D. J. Murray Mfg. Co., Wausau, Wis.

VICTOR IN-BILT VENTILATORS.—A.I.A. File No. 30-d-1. Catalog describing six models of in-bilt ventilators for use in bathrooms, kitchens, recreation rooms, etc. Specification data. 10 pp. 8½ x 11. Victor Electric Products Co., Inc., 2950 Robertson Road, Cincinnati, O.

ZURN FLOOR DRAINS.—A.I.A. File No. 29-c-3. Folder with descriptive and specification data covering the Zurn line of floor and area drains. 6 pp. 8½ x 11. J. A. Zurn Mfg. Co., Erie, Pa.

Published by the same firm, "Supremo Cleanouts." A.I.A. File No. 29-c. Folder describing the advantages of the Supremo line of cleanouts for use on drainage lines. 4 pp. 8½ x 11.

FLUORESCENT LIGHTING BY CENTURY. — Illustrated folder giving detailed description of 10 completely different types of fluorescent fixtures, including the Fluorelenslite which blends 70 watts of fluorescent with 300 watts of incandescent lighting in the same pendant fixture. 8 pp. 8½ x 11. Century Lighting, Inc., 419 W. 55th St., New York, N. Y.

ESCO EQUIPMENT FOR THE DRAFTING ROOM.—Catalog 2A describing and illustrating a complete line of drawing tables, posture chairs, drafting benches, straightedges, also a new line of Escolite T-squares. Indexed. 32 pp. 6 x 9. Engineering Sales Co., Sheboygan, Wis.

It's Not What You Pay NOW, but What You're GOING to Pay!

Barber-Colman Temperature Control Equipment is, of itself, only a means to an end. That end is to provide temperature control according to specifications FOR A LONG TIME TO COME, and with MINIMUM MAINTENANCE COSTS. Barber-Colman equipment may be more expensive, but it will prove cheaper and better in the long run. Fore-minded men know it is the Long Run that really counts. The old saw about the First Cost and the Upkeep is a warning to those who think only in the present.

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Two types of Transite Walls are available— the well-known Imperial Type and the newer, lower priced Universal Type. For details, see Sweet's Catalog or write for brochure TR-22A. Johns-Manville, 22 E, 40th St., New York, N.Y.

Johns-Manville

TRANSITE Movable Asbestos WALLS

(Continued from page 40)

Grievance: *Ed "You-can't-do-that" Brown,* Public Buildings blue pencil expert, is aggravated somewhat by P.B.A's. recent order on vacation leave. His annual two-week sojourn to Atlantic City will suffer a setback this year by one week. Too bad, Ed, but suppose the privilege entirely removed, as well it might be. Some departments are so rushed that the men are being unofficially asked to give up their vacations.

Regards from the Bureau of Yards & Docks, Navy Department *Karl Hartig,* overwhelmed with enthusiasm for his new administrative job, tells us that Bureau is hitting on all cylinders and breezing through their work like a PT on coastal duty off the Florida Keys. However, there's more than they can handle and some lucky pri vate practitioners are going to be happily surprised with a nice Government contract dropped in their laps. It may be you. Have you filed your application? RED

BETTER PLANNING

Excitement is simmering in the San Francisco Bay area, as forces have been at work, openly and secretly, to make San Francisco safe for better planning and modern architecture—and more of it. Ever since the National Planning Conference, and the "Space for Living" exhibit, put on a year ago by the TELESIS group of architects, landscape architects, planners, and industrial designers, the average citizen has grown increasingly receptive to talk and action on making this city an even better place to live.

What made a recent S. F. Chamber of Commerce-sponsored Public Conference an event without precedent was the fact that it brought together hundreds of private citizens, well able to voice their thoughts on local needs, with a number of key people, well able to put these thoughts into action. There were positive results: a decision to form a Citizen's Advisory Committee to study development of a Master Plan for San Francisco and to aid the Planning Commission in popularizing the Master Plan in the various districts of the city, through a program of education; also endorsement of a campaign for the modernization of downtown and other business and commercial areas.

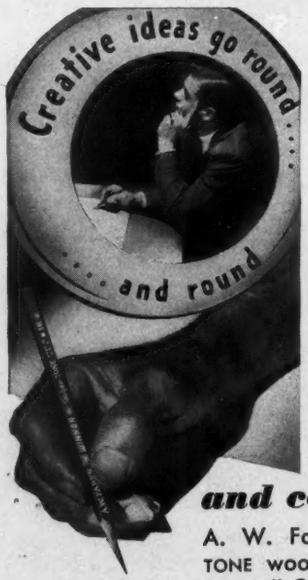
The San Francisco Housing and Planning Association, in conjunction with TELESIS and other progress-minded bodies, now is conducting a publicity campaign to drive home the vital importance of the Master Plan idea to people in all walks of life.

Regional Planning for the S. F. Bay Area took a step closer to official realization when the California State Planning Board held an all-day hearing, as required by law, to find out how city and county officials and citizens felt about solving Bay Area problems on a regional basis. The outcome was that housers, planners, and architects enthusiastically supported the idea, and most county officials promised official backing. It looks as if San Francisco Area is "growing up" as a metropolitan unit. For the occasion TELESIS arranged what is probably the first public exhibit on regional planning for the Bay Area.

The Commonwealth Club, that venerable Californian institution, the other day opened the eyes and ears of distinguished members and guests with a discussion on "Modern Architecture vs. Traditional

(Continued on page 52)

• *Harper Theatre, Detroit; Charles N. Agree, Architect*



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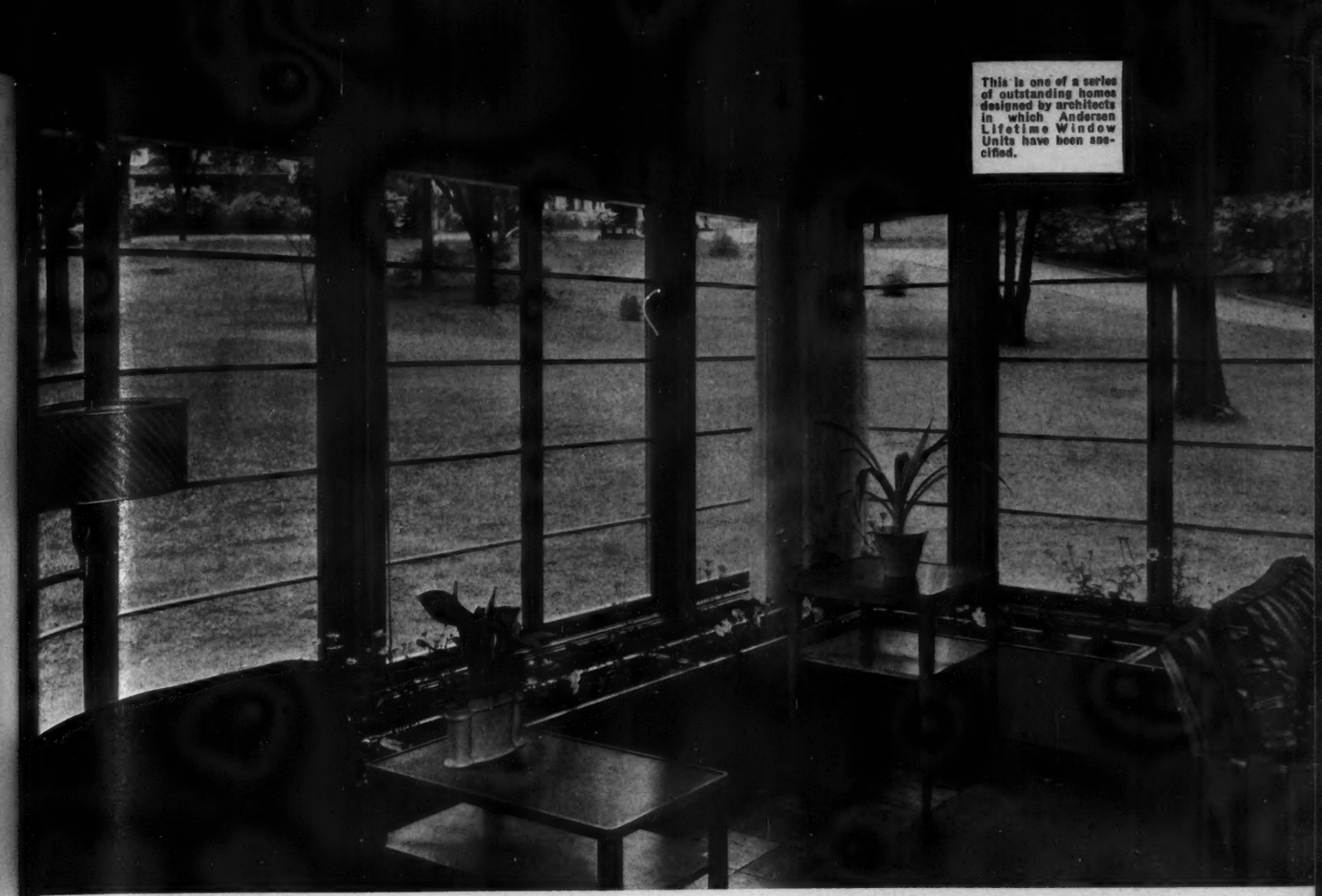
This is one of a series of outstanding homes designed by architects in which Andersen Lifetime Window Units have been specified.



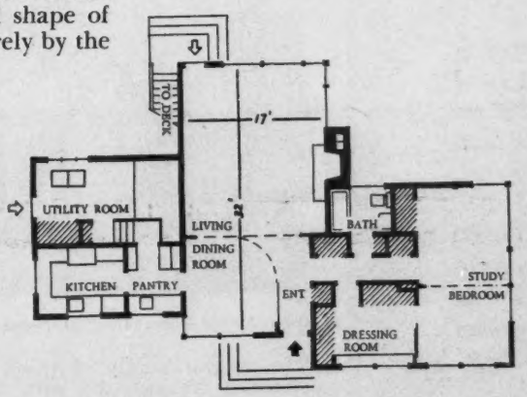
Designed by MALCOLM E. LEIN of LEIN, TUDOR and BEND

ANDERSEN HORIZONTAL GLIDING WINDOW UNITS ACHIEVE SPACIOUSNESS IN THE WALKER ART CENTER "IDEA HOUSE," IN MINNEAPOLIS, MINNESOTA

To demonstrate the most progressive ideas of fenestration in the home, the architects of this, the first Art Center-sponsored home in America, chose Andersen Horizontal Gliding Window Units.

The reasons for this choice are aptly stated in the Guide to the Idea House: "The most important 'idea' of the house is spaciousness . . . the use of large windows for view and sun and smaller windows where ventilation is of primary interest should be noted . . . the large windows on the south with the interior flower boxes create the feeling that the garden is a part of the house and accentuate the spaciousness of the room . . . the size and shape of windows were determined entirely by the needs *inside* the house."

The Andersen Horizontal Gliding Window is a complete window unit. It is completely weather-stripped, and is suited to rigorous climates where weather-tightness is of paramount importance. This window is especially adaptable to large window areas, since it is not confined to sizes that can be counterbalanced or swung on hinges.



Exterior of Livingroom demonstrates the superb contribution made to the design of the Walker Center Idea House by Andersen Horizontal Gliding Window Units.

Interior of Bedroom, showing the use of fixed-sash "picture" window flanked on each side by large Andersen Horizontal Gliding Window Units.

FOR FURTHER INFORMATION, SEE SWEET'S CATALOG, SECTION 15/24, OR WRITE ANDERSEN FOR TRACING DETAILS AND SPECIFICATIONS.

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(Continued from page 50)
Architecture." It came as a delayed-action bomb to many when Golden Gate Bridge Architect *Irving Morrow,* at the end of a weighty and carefully-worded document, proclaimed the findings of the Club's Architectural Section to be *in favor* of Modern Architecture. Architect *Richard Neutra,* long-time pioneer of the contemporary approach, was scheduled to add his say, to be followed by white-haired, many-titled *Arthur Brown, Jr.,* as champion of traditional architecture. Many came hoping to be in on a fight. Instead, Neutra left early to catch a train, after he had had his say, and Brown in the course of a long, delightfully rambling speech said little that could be construed as a valid defense of the Traditional Approach. So there was only an eloquently tacit agreement.

Architectural draftsmen have been much in demand, with large scale naval building going on in Oakland, and defense housing in Vallejo, Pittsburgh, and other centers. Some architects in private practice have actually been commissioned to render professional services on defense housing projects in this region.

Very much in the public eye, complete with Sidewalk Superintendents' Clubs, are two major downtown projects now in process of construction: the new NBC headquarters, *Albert Roller,* Architect, and a subterranean garage to house 1600 cars, beneath Union Square. The latter is expected to mitigate downtown traffic problems, although the sceptics whisper of heavily *increased* auto vs. street car jams due to the battle of 1600 cars getting in and out of the great "gopher hole." We wonder who's right. That huge, deep cavity now yawning at downtown shopping crowds, has made local columnist Herb Caen wonder how dentists must feel looking down on it from their offices in a nearby skyscraper! *Timothy Pflueger* is the Architect for the garage scheme. W. L.

BOSTON NOTES

On July 10th the Massachusetts House of Representatives is said to have passed House No. 2248, the architectural registration bill. That leaves its ultimate fate in senatorial hands and presages a decision betimes.

The only architectural school which has a degree of vitality all-year-round seems to be Harvard's. Students there have just inaugurated a quarterly publication called "TASK," an endeavor which got its impetus from an MIT-Smith-Harvard discussion group. This magazine fits into the pattern for a more enlightened architectural understanding, along with conferences and correspondence, by the projection and sharing of ideas anent social requirements, new techniques, new materials, and new types of planning.

To mention a few of "Task's" first contributors there is *Maholy-Nagy* with "New Trends in Design," illustrated with photograms; "Furniture Design," by *Willo von Moltke,* of the Museum of Modern Art's furniture competition; a report on prefabrication from *Robert L. Davison,* and "Architectural Education" by *Dr. Gropius.* The address is: Task Magazine, Robinson Hall, Cambridge, Massachusetts.

Harvard men of a couple decades back will rejoice that *Norman Brazer* has at last settled down and become a father. The blessed event was an eight-pound male with an eye to the ladies. Fontainbleauers will be interested to know *Sam Santoro* has just been spliced with some formality. LEON KEACH

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Cabot-stained house. Architect, Melvin N. Garlough, San Marino, California

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Cabot's Shingle Stains
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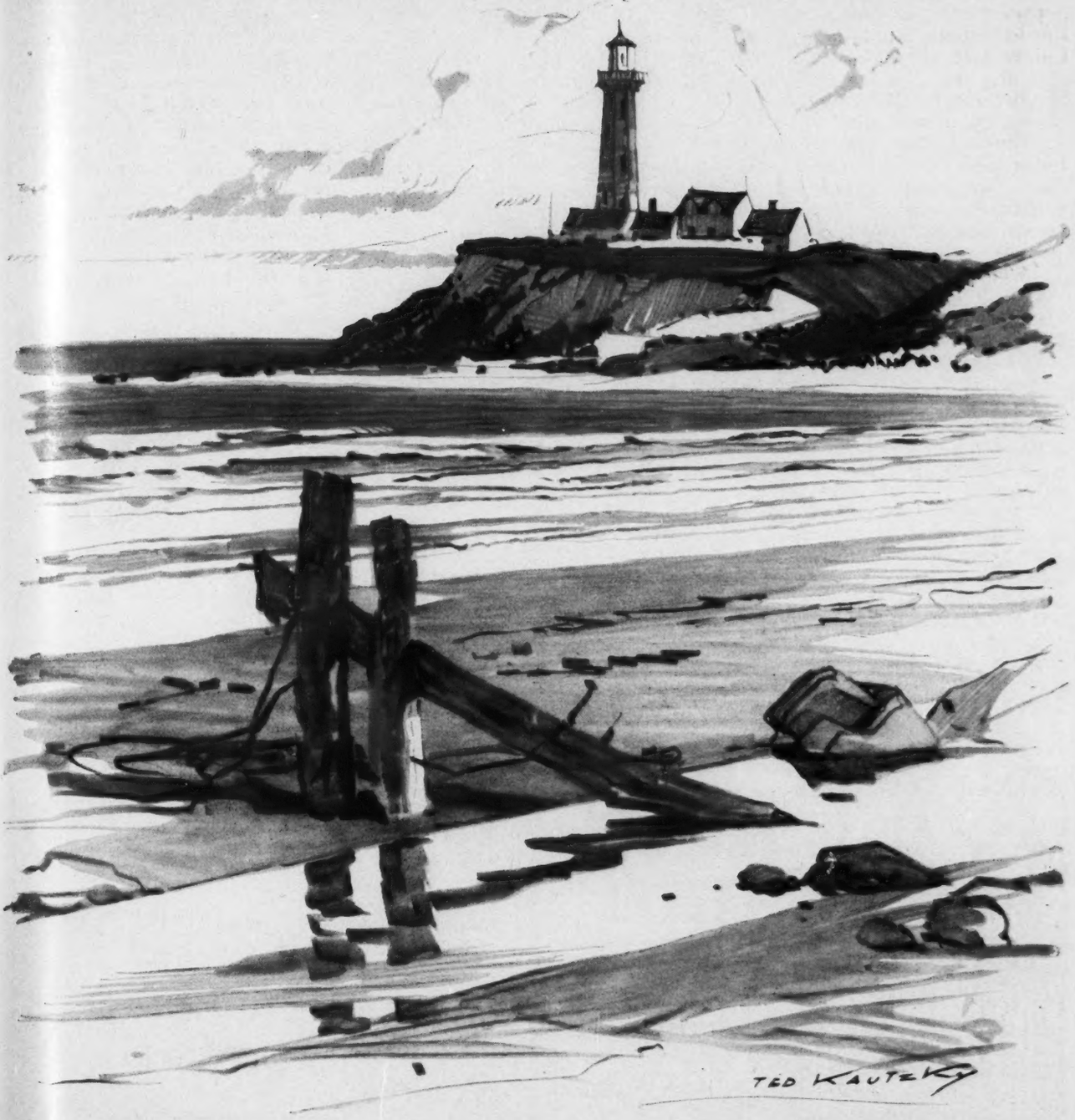

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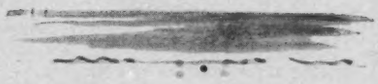
A. The posts in the foreground were modelled with broad, flat pencil strokes (Venus 4B), drawn in varying directions to indicate the form and shape of the posts. The reflections were drawn with horizontal zigzag strokes, using the same type of pencil point.



B. The receding beach and water were drawn with flat strokes, graded in intensity from light to heavier and light again (Venus 2B). The lower edges of the waves were accented with a sharp pencil point.

COMPETITION ANNOUNCEMENTS AND RESULTS

The award of seven full resident scholarships and nine tuition scholarships at the Cranbrook Academy of Art, for the school year 1941-42, has been announced.

Those receiving the full resident scholarships are: *Robert W. Moser,* Eugene, Oregon; *Stephen W. Page,* Detroit, Michigan; *Charles W. Lane,* Almont, Michigan; *Ruth Keller,* Webster Groves, Missouri; *Clarence E. Van Duzer, Jr.,* Cleveland, Ohio; *Helge Westermann,* Copenhagen, Denmark; *Jack K. Steele,* Detroit, Michigan.

Those receiving the tuition scholarships are: *Mary Elisabeth Pike,* Redwood City, California; *Winslow Eaves,* Detroit, Michigan; *Betty Helen McBride,* Monroe, Michigan; *Robert Eaton,* Pontiac, Michigan; *Efrem M. Waskowsky,* Chicago, Illinois; *Paul G. Valkenier,* Brookline, Massachusetts; *Alexander Goldfarb,* New York, New York; *Virginia Dudley,* Chattanooga; *Jay Robinson,* Detroit.

KINLEY FELLOWSHIP

The award of the tenth annual Kate Neal Kinley memorial fellowship at the University of Illinois to *Paul H. Jones* of Urbana has been announced by Dean Rexford Newcomb of the College of Fine and Applied Arts, chairman of the fellowship committee. This provides $1,000 for study here and abroad and the 24-year-old winner, who is an artist, plans to use it to study painting, possibly at Cranbrook. The alternate is *Elsie Mae Bittinger,* Onarga, Illinois, a candidate in the field of Voice.

DEFENSE POSTERS

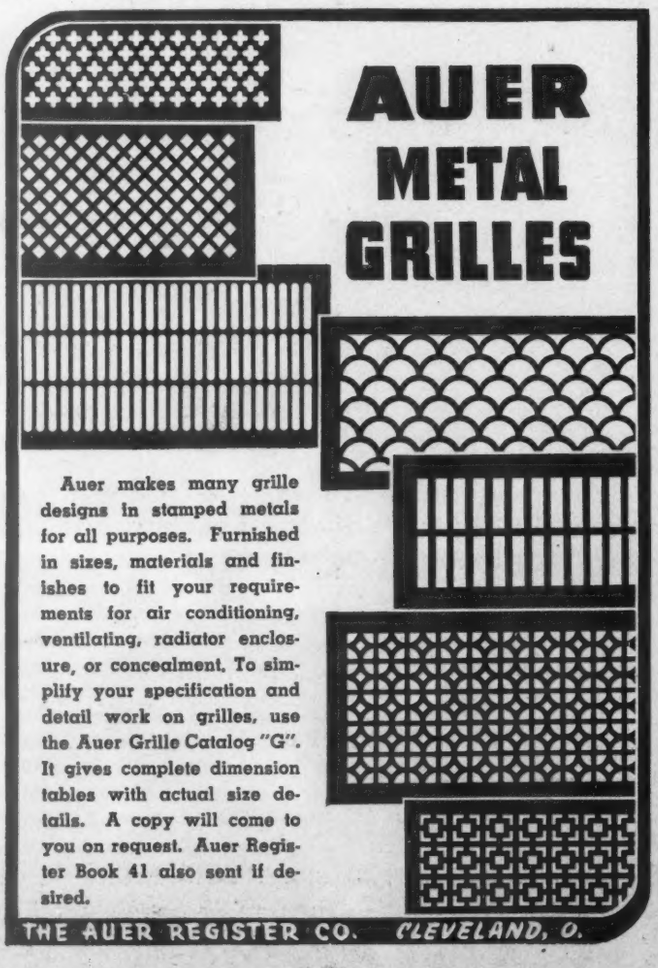
When the jurors completed the anonymous judging of 610 posters submitted in the POSTERS FOR NATIONAL DEFENSE competition held in June by the Museum of Modern Art in New York, they found that two men had alternately won First and Second Prizes in both sections of the competition. Army and Treasury officials have expressed satisfaction with the results of the competition and *Harford Powel,* Information Director of the Defense Savings staff, has announced that the Treasury Department probably will purchase and use many of the posters in the competition in addition to using the winning posters.

John C. Atherton, of Ridgefield, Connecticut, won the First Prize of $500 in Group A (posters for U. S. Treasury Department) and also the Second Prize of $250 in Group B (posters for U. S. Army Air Corps). *Joseph Binder,* of New York, who won First Prize of $500 in Group B, also won the Second Prize of $250, Group A.

BRUNNER AWARD

Hobart B. Upjohn, of New York, nationally known for his work in ecclesiastical architecture, has been awarded the $1,200 Arnold W. Brunner Scholarship for 1941 of the New York Chapter of The American Institute of Architects, it is announced by *Harvey Stevenson,* President of the Chapter.

Mr. Upjohn, whose grandfather, Richard Upjohn, was President of the Institute from its founding in 1857 until his death in 1876, plans to write a history of the Institute, up to 1900.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Modernly and scientifically planned

from its foundation to its . . . RU-BER-OID Built-up Roof!

It's unique—this "controlled conditions" building, new home of the All-Steel-Equip Company, Inc., at Aurora, Illinois. It symbolizes outstanding efficiency in planning, modern design and sound structure. Protecting this distinctive building is a Ruberoid Bonded Built-up Roof, a tribute to Ruberoid's known dependability.

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AT LARGE IN THE LIBRARY

LANDSCAPE ARCHITECTURE IN THE MODERN WORLD, *by Karl B. Lohman. (The Garrard Press, 1941, 181 pages, 165 pages of text, 16 unnumbered plates of illustrations, cuts of plans and diagrams. 9¼" x 6¼", $2.50).*

In a slender volume, the author deals broadly with the field of landscape architecture moving in the open from garden to farm, to park, through cemeteries and golf courses, out into the country and back to town without becoming ensnared in the tangle of shrubbery in which most authors lose not only their way, but also the light.

By a series of short chapters several of the various modern problems which concern the landscape architect are tersely reviewed, often with a statement of an outstanding solution, occasionally with general cost data, and more often with basic design data. The chapters on Farms (XIII), Parks (XVI), Golf Courses (XX), School Grounds (XXI and XXII), and Cemeteries (XXIV)—to use their subjects rather than their full titles—are well written, and, to this reviewer, satisfactory.

Chapter XIV on the City Lot also is well-written but overlooks an important fact; which is, uninspired land use in too many instances can be laid to the doors of the deed restriction and the zoning ordinance as well as to design inertia. Chapter XVII on Outdoor Theaters omits a much-needed discussion on the gradient of slopes for the audience. Arboretums (XVIII) would have been improved by a brief schedule of areas required for adequate display of exhibited species thus indicating conclusively that most such endeavors are conceived in parsimony. Chapter (XIX) on Zoos, a page and one-half, does no more than acknowledge we have a problem. The other chapters are good statements of their titles.

Since this book discusses landscape architecture in today's world it is disappointing to note that subdivisions, industrial and fair grounds have not been noted. Missing also, is a discussion of the landscape architecture of public housing, although a brief reference to Greenbelt Towns is made in respect to their park aspect rather than to the planning of land for human use and enjoyment. In an enumeration of current type of problems confronting landscape architecture, National Parks, National Forests, and other regional problem areas deserve mention because many landscape architects are devoting their careers to these projects.

Withal, the book has distinct value. The bibliographies at the end of each chapter are sound. For the active landscape architect it briefly refreshes the memory, and for the architect seeking factual data in an allied field it will save much fruitless perusal of chaff. It can be safely recommended for those individuals in responsible positions who have the administration of landscape projects, or courses of landscape architecture, on their hands and who wish to be informed without the effort of wading through heavy tomes.

The illustrations and drawings at the back are not satisfactory examples of reproductions. A few, as impressions of an idea, are well enough but cuts of plans and generally all pictures, in this reviewer's opinion, should be as sharp and clear as crystal—or else not attempted. WILLIAM A. STRONG

EVEN THOUGH THE WOOD FLOORS IN OUR SCHOOL GET SEVERE USAGE THEY ARE ABLE TO TAKE IT AND CONTINUE TO LOOK WELL, THANKS TO FINISHING WITH LIGNOPHOL
WHEN WE THINK OF WOOD FLOORS

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See reproduction of various woods in natural colors in Sweet's Catalog, page 17/40.

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*The **ONE** application wood finish*

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Preserves and brings out the natural beauty of the wood

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Never rust, wear, break nor fall out. Vents *stay* aligned, work smoother, and "weather" better.

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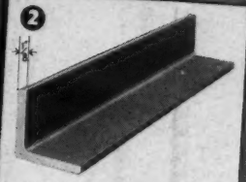

ALL WEATHERING MEMBERS HOT ROLLED 1/8" ANGLES

Won't bend, spring out of shape. Extra thickness . . . longer life, more durable. Factory-fit *lasts.*

3

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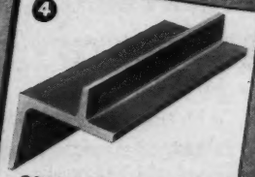
4



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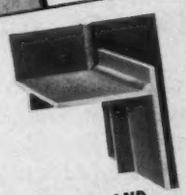

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♦ In the luxury and thoughtful care given to the unusual design features so evident in this bathroom by Mr. Neutra, it is significant that Marlite was specified for the walls. Notice particularly how the architect used unbroken surfaces of the Marlite wall-size panels to enhance the spaciousness and modern simplicity of line. Marlite Pre-finished Wall Panels — available in more than 100 popular colors and patterns—offer you a scope of decorative adaptability for creating truly modern interiors in a degree unmatched by other types of wall materials. For further information, write — or see Sweet's 11/39.

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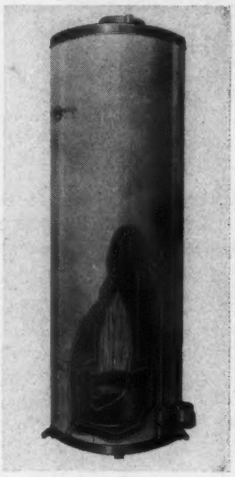
NEW PRODUCTS

CHRYSLER AIRTEMP ANNOUNCES NEW OIL-BURNING WATER HEATER

A new automatic, oil-burning water heater which, it is claimed, will provide all the hot water required by the average family for approximately 3c a day, has been announced by the Airtemp Division of Chrysler Corporation, Dayton, Ohio.

The new heater which has been under development for a long time, makes use of a patented vaporizing oil burner. The Airtemp burner is said to be highly economical due to the use of two stainless steel baffle plates and the scientific arrangement of air intake ports under each. Thus, whether the burner is operating on low flame, high flame or at any point between, complete combustion is assured by the thorough mixture of oil vapor and air. A clean burning, intense flame results.



Entirely automatic in its operation, the new Airtemp water heater, 20-gallon size, provides 25 gallons of scalding-hot water an hour. The oil control accurately meters exactly the amount of oil required by a thermostat in the tank. Pilot flame uses only a few drops of oil per hour. The new heater is available also in 30, 40 and 50-gallon capacities, each of which provides 34 gallons of scalding-hot water per hour, based on 80° rise in water temperature.

All models are finished in attractive white enamel with black trim. Cabinets are insulated at the sides with metallation and at the top with rock wool.

NEW FLUORESCENT CONTINUOUS LUMINAIRES

A new line of surface-mounting fluorescent luminaires for commercial interiors, designed especially for single or continuous strip illumination has just been announced by the Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa. Two styles are available, both for direct lighting, the CL-40 single lamp unit, and the 2-CL-40 two lamp unit. Both utilize 40-watt, 48-inch white or daylight fluorescent lamps.

Units consist of ornamental steel runner, ornamental end caps, reflector, ballast, starting switch, sockets, wire and glassware. The glass sections, one of which is necessary for each lamp, are Alvax glass. Alvax, although translucent, has high transmission qualities, yet sufficient opalescence to conceal the lamp. Mounting is provided for by six slotted holes in the base of the unit. Two ½-inch conduit knockouts are provided in each runner.

The company also announces a new ornamental fluorescent luminaire, the CL-160, suitable for general commercial lighting installations in offices, schools, stores and public buildings. Available with

(*Continued on page 61*)

(*Continued from page 60*)

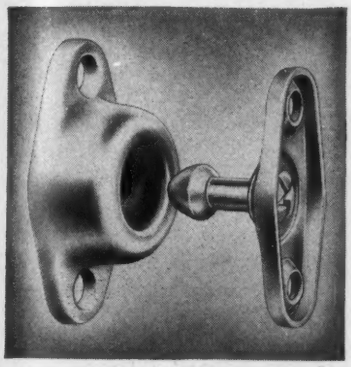
three types of diffusing media for different light distribution requirements, the unit uses 4 40-watt, 48-inch fluorescent lamps, either white or daylight or combinations of both.

With a louver bottom, 30% of the light is directed downward, 70% upward; with a clear ribbed glass bottom panel, 25% of the light is down, 75% up; and with decorated ribbed glass, 22% of the light is down; 78% up.

NEW SILENT DOOR HOLDER

Of entirely new and simplified construction, the new door holder recently perfected by The Bassick Company, Bridgeport, Conn. is said to meet a very real and widespread need.

This new door holder consists of just two parts —a metal plunger and a rubber insert encased in a metal socket, each part held firmly in place by just two screws. No oiling, adjustments or other servicing necessary after the simple installation is made.



There are two types of plungers which make them suitable for practically any door—the type illustrated is the straight plunger for wall installations, the other type is a goose-neck shape for floor installations. The rubber encased metal socket is the same for both plungers.

The quiet operation and simplicity of this new door holder is recommended for use in homes, hospitals and other institutions, offices, and wherever doors should occasionally be kept open.

NEW TYPE WINDOW SPRING

The Dodge Sales Co., 519 N. 66th St., Milwaukee, Wis., is distributing a new type of window spring, known as the Jiffy Window Control Spring, which is being used in more than thirty U. S. Army camps, hospitals and airports. The new spring, it is stated, saves money on the cost and application of barrel bolts, while allowing the same freedom of opening and closing for double-hung wood windows that weights and pulleys provide.

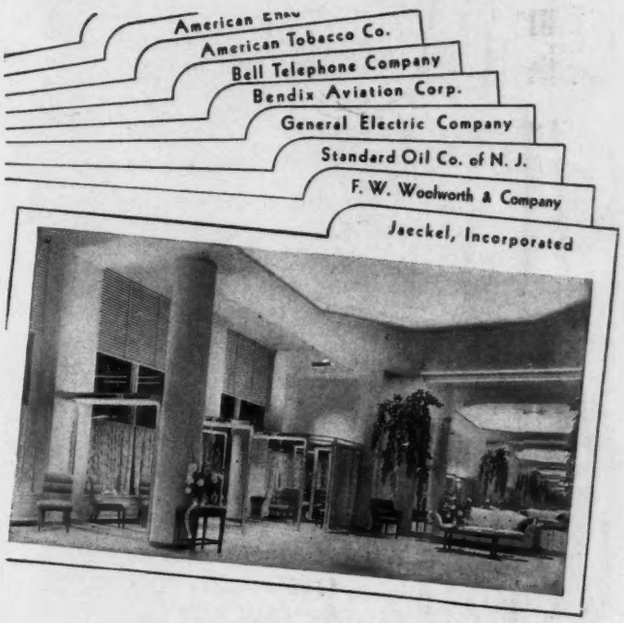
The Jiffy window control spring is a flat spring, 1¼ in. x 6 in., made of annealed hard spring bronze, slightly curved to exert pressure as it is installed.

On new construction four Jiffy springs are applied to each window between the edge of the sash and the jamb; one on each side of both the upper and lower sash. They provide a constant

(*Continued on page 62*)

They Did It Right with *L-I-N-O-L-I-T-E*

TRADE MARK



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Even under "all-out" service conditions, Whale-Bone-Ite Closet Seats will stop replacement costs and still be serviceable a long time after. They have no finish coat to wear off; they're molded of "diamond-hard" composition with a resilient laminated core. They're water-tight, warp-free, easy-to-clean, and have molded-in hinges that don't loosen or corrode. Repeated disinfecting doesn't harm their lustrous jet black surface.

What's more, Whale-Bone-Ite Seats cost no more than ordinary heavy-duty types.

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MAKERS OF FINE CLOSET SEATS FOR EVERY INSTALLATION

Brunswick
WHALE-BONE-ITE CLOSET SEATS

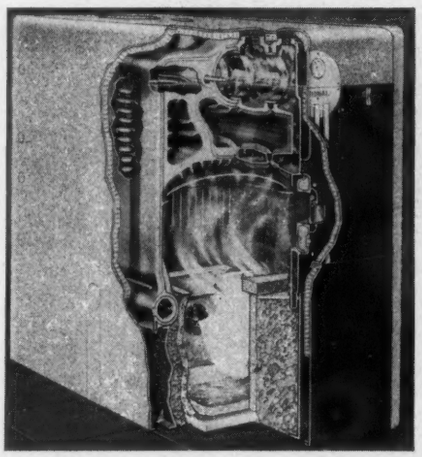
(*Continued from page 61*)

pressure which holds the sash firmly in any position, but which permits easy raising and lowering. It is not necessary to mortise or recess to install these springs.

NEW NATIONAL OIL-FIRED BOILER

The National Radiator Co., Johnstown, Pa., announces that the new 1941 No. 20 Series deluxe oil-fired boiler and complete All-in-one heating unit were designed to provide modern attractiveness in addition to improved internal design in heating equipment. The burner, controls, and accessories are concealed in a cabinet at the back of the boiler.

Internal construction design improvements include: extended heat extractor surface in flue-ways and under crown-sheet; heat conserver baffles to direct flow of hot gases against these projecting surfaces; properly sized easy-fit combustion chamber may be obtained for the boiler and is standard equipment with the unit; patented dry steam baffles give quicker heating and eliminate water-hammer; front section has a flow-tapping for circulating hot water systems; an observation port in the inspection door permits check-up on combustion conditions without opening door, thus eliminating excess air; a draft and CO_2 analysis tap is provided in the front inspection door and also in the smoke collar; inspection and cleanout doors are tightly clamped to a ground surface; boiler sections are pulled together against a ground bead iron-to-iron surface preventing air or gas leakage; a side and rear access door in cabinet permit easy adjustment of burner and controls; a wide variety of tank and tankless hot water heaters are fully submerged in the back section.



The No. 20 Series deluxe oil heating unit is equipped with a quiet burner; long-hour motor with overload protection; positive pump and turbo-blast head. Capacities range from 360 to 780 sq. ft. steam.

NEW HIGH-GLOSS FINISH FLEXBOARD

A new, high-gloss finish flexboard has recently been perfected by Johns-Manville, New York, and added to its line of asbestos-cement sheet materials. The material is called DeLuxe Flexboard and, it is stated, sets an entirely new style in prefinished wall sheet materials.

DeLuxe Flexboard is especially suitable for application in kitchens and bathrooms of homes, and can be used in new construction or applied over old walls and ceilings in existing homes.

There are three styles of sheets in DeLuxe Flexboard—4 ft. x 8 ft., plain; 4 ft. x 8 ft. with hori-

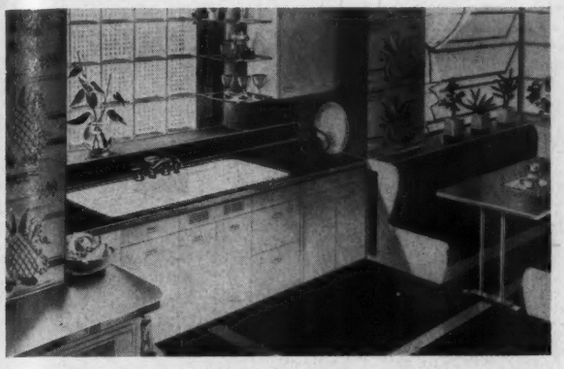
(*Continued on page 63*)

(*Continued from page 62*)

zontal scoring on 12 in. centers and 4 ft. x 4 ft. with 12 in. x 12 in. box scoring. The material is available in eight attractive colors: Blue, green, peach, yellow, red, ivory, black and white.

STANDARD ADDS TWO NEW CUSTOM-LINE SINKS

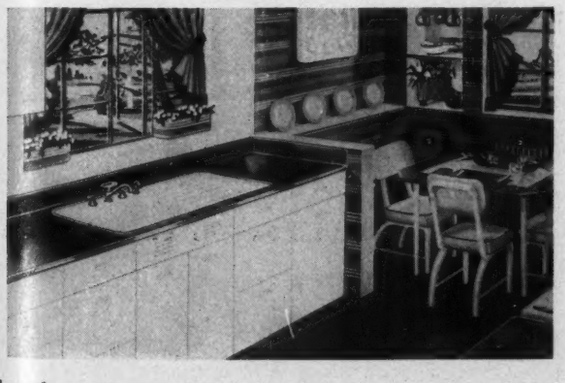
Two new Standard Custom-Line sinks are offered by American Radiator & Standard Sanitary Corp., Pittsburgh, Pa. for use with custom built kitchen cabinets. Standard Custom-Line sinks are designed especially to provide an ideal unit where continuous counter tops are desired, and the two new models give wider selection in this popular line.



Custom-Line P-7002-S double drain board model measures 4½ ft. in length, 21 in. in width, and length of each drain board exclusive of the rim is 16½ in. The 8 in. deep sink well is 18½ x 15½ in.

Dimensions of the single drain board model, P-7004-S with sink on right and P-7008-S with sink on left are, 3½ ft. in length, 21 in. in width, and length of drain board exclusive of the rim is 20 in. The 8 in. deep sink well is 19½ x 15½ in.

Both models are cast iron, acid-resisting enameled flat rim sinks with back ledge and center outlet, and are supplied with Auto-Unit Re-Nu combination swinging spout faucet with soap dish and rubber hose and spray. This faucet requires only one



hand to operate. Spray is released only when thumb lever on spray head is pressed, preventing any unexpected discharge. Cast brass faucet body is rigidly assembled with screw connections, eliminating slip joints and possibility of leaks under the sink. In addition to this convenient and modern faucet, the sinks also have the popular Chromard crumb cup strainer and stopper as regular equipment.

All Standard Custom-Line sinks are available in white and 11 beautiful colors.

Whatever Your Specification ... Stanley Makes It

Stanley Hinges for Combination Doors

As combination screen and storm doors become increasingly popular, architects are specifying Stanley No. 152¼ Adjustable Tension Spring Hinges for hanging them.

Ordinary Spring Hinges Not Suitable

The combination door uses a screen panel in the summer and a glass panel in the winter. Due to the difference in weight between the two, ordinary fixed-tension spring hinges are not satisfactory.

Stanley 152¼ Hinges of wrought brass are designed for this service. Made of heavy gauge metal and equipped with heavy springs of best quality steel wire, their tension can be easily regulated for correct closing of either weight door.

AN AID TO YOUR SPECIFICATIONS

Stanley Catalog No. 61 is a handy guide to the best in building hardware. It gives complete details and specifications on the complete Stanley line, and will prove invaluable as a reference when you are making up specifications. Write for your copy. The Stanley Works, New Britain, Connecticut.

STANLEY

HARDWARE FOR CAREFREE DOORS

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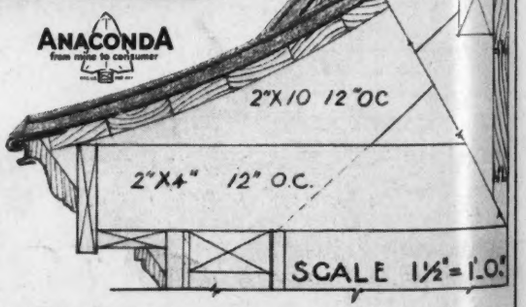
PENCIL POINTS

September 1941

TYPIFYING the manner in which standing seam sheet copper roofing may be used over bays and entrances to impart both warmth and color, and to accentuate the structure's individuality

Anaconda Copper



THE AMERICAN BRASS COMPANY— General Offices: Waterbury, Connecticut • Subsidiary of Anaconda Copper Mining Company • In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont. 4165

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CRITICAL YOUTH WIELDS THE FLAIL

Come September, many of us find ourselves again students. To you, PENCIL POINTS, *through this column, offers an opportunity to submit articles on architectural subjects, not exceeding 400 words, and due the tenth of each month preceding the month of publication.*

We hope a generous amount of letters will reach us each month, and that many of you may enjoy seeing in print some thought of your own. P.P.

EPOCH IN WAITING

As each day passes it becomes increasingly apparent that those of us who thought the present war would be short and localized are going to be wrong. Obviously the entire world is going to feel the violent repercussions. As more countries join the fray the end is farther from sight. Breathless and bewildered we sit before our radios trying to gain some comprehension of the catastrophic events. Around us we are conscious only of our own accelerated living; ahead we see only depression, despair, darkness.

Yet, fundamental happenings produce fundamental changes. Out of the great disillusion which lies ahead may come a great and powerful cry on the part of humanity for a new way of life. For this reason now is a time of great consequence for those who feel that man still has something better to find. It is a commanding opportunity to build a new world, a new humanity, a new living.

This new living cannot be brought about by a great prophet or powerful group of men operating through some sort of "ism." It must be the natural result of a sincere social consciousness on the part of all men to live in peace. We must direct our great technical abilities toward producing this new world for better living.

Of all human activities, that of building and planning the structure is going to be important. The building profession, with its city planners, designers, engineers, and workmen must work together to produce the physical side. They must, however, keep pace with the sociologists and educators who are working to help the new man find his place in the world, and the scientists who are eliminating the remaining natural obstacles which stand in the way of our new living.

The architect can play his part by effecting the consolidation of the planning-building profession into a smoothly-operating, integrated organization in which each takes his place according to his qualifications. The ridiculous separations between architecture, city planning, engineering, and building must and will be eliminated. The reference in this new planning-building profession must be to tomorrow, not yesterday.

Style in architecture will remain because it is there by nature. Tradition in architecture must go because it is not bred of fundamental thinking but of superficial intellectual sophistication.

In architecture, as in all other branches of human activity, much of which has gone before is good and fine; but no one must feel for a moment that there is not a vast amount of room for improvement and that this improvement is not coming. As surely as man still continues living on earth so surely will he see improvement in himself.

CARLETON M. WINSLOW, JR.
University of Southern California

IN UNITY THERE IS . . .

Architects, probably more so than any other major profession, have less unity, organization, and protection than the average person might imagine.

Of all the professions, architecture is one of the most important, if not the most important, simply because it deals with human shelter, which in turn is one of the fundamentals of self preservation.

Everyone claims some kind of a shelter, which immediately relates each individual with the business of an architect, if not directly with it. By hypothesis, it would follow that the architectural profession would be the most extensive, the most organized, and most profitable of all. Unfortunately, it is none of these, and indeed it is characterized by the contrary.

Let the architects blame only themselves. Why have certain monthly magazines been permitted to run house plan after house plan, which can be secured with specifications for less than $1.00 in some cases? One never opens a magazine and sees a doctor's prescription which might be cut out and taken to a drug store to be filled. Nor does one ever notice information

"A short distance south of Natchez, Mississippi, stands the aberration evidenced by this photograph. One is terrified upon first approach but momentum is soon regained when observing the adjacent beer sign, resulting in the urge to stop and enter 'Mammy's Petticoats'. Functional, I would say. Natchez—where the swains of yesterday sipped their juleps amidst bric-a-brac'd, staid mansions—where today they quaff ale behind Mammy's Hoops."

L. MILTON KING, *A.I.A.*
Monroe, Louisiana

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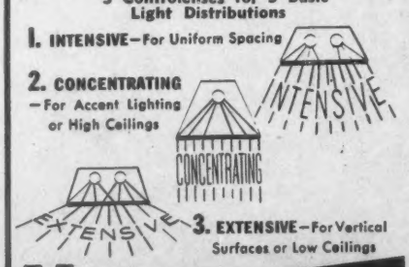

3. EXTENSIVE—For Vertical Surfaces or Low Ceilings

Holophane
COMPANY, INC.
342 MADISON AVENUE
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published by lawyers giving proper procedure for many of their practices. In the two latter professions, their excellent organization and associations make it so one must visit their offices for information, and pay dearly. Architects do have local chapters, but one belongs or not, and price cutting is notorious, to mention but one of the vices due to lack of organization.

Why is it possible for the great majority of low-cost house builders to hire a local contractor to build their house according to a nondescript sketch on the back of an old envelope, plus the contractor's fascinating imagination? Every architect is convulsed when he drives through rural sections, as well as inexpensive developments. It is this local contractor or his agency who is largely responsible, but what is done to control it?

There are large areas of rural country completely unrestricted as to building and builders. We certainly know of no such section where an unlicensed man may try a case in court or perform a surgical operation.

Why should not every structure be licensed and submitted for approval to a state-wide architectural bureau? This would give protection to the entire state, whereas now, this exists only in sections supervised by ordinances and zoning laws of a limited locality. Added to the services of this bureau, there could be free advice and planning to those who could not afford an architect. This need not injure the practice of the private office. If a project as great as a public state health system can determine who is needy and who is not, and give service, (at the same time not injuring the private practice of doctors), the same should work for the architect.

If a house owner with as little as $2500 to invest had some professional advice he could be assured a better investment, and the public saved some unfortunate contractor's dream. If every structure in a state had to be approved, either by a petition filed through one's privately-engaged architect or through a public state agency, the architect would begin to enjoy his own right.

Most of this has concerned the house builder, who is just one part of the large building scheme. Needless to say, the engineer has increased his realm from purely engineering projects to the architect's field, and, we must say, in a number of cases has impressed many as a bull in a china shop. Engineers, by the nature of their subject and training, when making their appearance in the architect's field, totally lack a feeling for the warmth, charm, and planning achieved by the subtleness and imagination of a trained architect.

So it seems the architect's greatest competitors are: women's magazines just full of little "house secrets"; the total lack of organization and protection enjoyed by other professions; the engineer; and to be sure, the delicate, ariel, little architect himself, who must learn the best defense is a great offense.

Would it be too amiss for the local chapter of the A.I.A. to organize a bit of publicity to impress upon the public the great service an architect is able to render the individual, as well as the appearance of the entire country?

If a little organization and publicity has kept a bottle of Coca Cola in everyone's hand day after day, think of the possibilities with all the architect has to offer.

PAUL PIPPIN
Columbia University

* * *

PEIXOTTO FUND

Those who have admired work of the late *Ernest Peixotto* will be interested to know of the organization of the Ernest Peixotto Memorial Committee headed by *Royal Cortissoz,* distinguished New York Art Critic, proposing to establish a Trust Fund to provide periodically a substantial award for a deserving American mural painter under 30 years. Competitions will be held and selection of the prize-winner will rest with a jury of independent artists and critics to be appointed by the Memorial Committee. Gifts for this Fund should be sent to *Peter Grimm,* Treasurer, 51 East 42nd Street, New York.

MUSEUM EXHIBITIONS

Two exhibitions of interest to the architectural profession have been scheduled for Fall presentation by The Museum of Modern Art, New York. The Fall season will open September 24 with an exhibition, *Organic Design in Furniture and Furnishings,* to remain on view until November 9. At this exhibit, four Latin-American industrial designers will also show their work.

On November 26 the Museum will show the work of Eric Mendelsohn, a leading modern architect formerly of Germany, now living in this country.

TOLERANCE

We know only too well how much you need steel. We are doing everything humanly possible to get it for you. Every man in this company is doing his utmost to produce every possible pound of material.

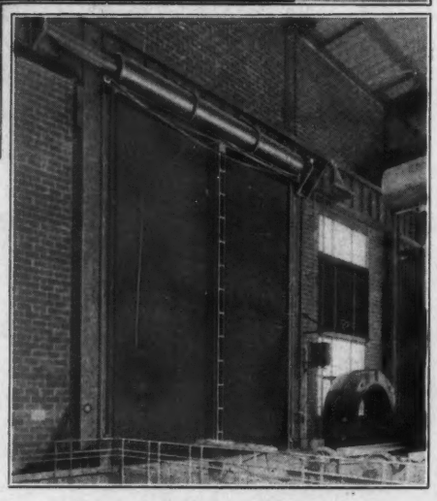
Because of the seriousness of this nation's emergency, defense must come first. We are cooperating with the Government to the limit as you would want us. At the same time we are keenly aware of the needs of our customers, and we are doing our best to serve you, too.

Tolerance is one of the virtues that will help tremendously in this hour of our country's need.

THE YOUNGSTOWN SHEET AND TUBE COMPANY

YOUNGSTOWN, OHIO

GIVE YOUR CLIENTS THIS EXTRA PRODUCTION SPACE



Consider how much your clients will want the production aids these famous interlocking steel-slat doors (originated by Kinnear) afford! For instance . . .

Coiling upward action permits full use of all floor, wall and ceiling space. Rugged all-steel construction reduces maintenance, avoids loss-time repairs.

No protruding mechanism to obstruct cranes, conveyors, ducts, or light.

Doorways completely cleared in one smooth, easy, rapid operation.

Ideally adapted to motor operation, with multiple-point remote control if desired.

All-steel curtain protects production against fire, weather, intrusion, sabotage, etc.

Slats easily replaceable—quick, easy, economical repair if accidentally damaged.

Excellent blackout protection for all doorways without special equipment. (Write for details on other Kinnear Rolling Door advantages!)

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HERE, THERE, THIS AND THAT

POTOMAC PATTER

This slightly (?) overcrowded community is begging for mercy. As a direct reflector of your government's activities, your nation's capital shows a similar fix. No help, no materials and no let-up in sight. Private architects and engineers simply cannot keep up with the demand for services. Housing, both defense and private, is at full speed. Apartments of extraordinary magnitude keep popping out of the ground and in the most unusual places, remodelling projects of any and every nature pepper the city, and contractors are going beserk trying to get building materials. Not only those specified but acceptable substitutes. It's getting so that architects will have to specify alternate materials or design their structures in such ways that non-priority materials are eliminated. And Brother, what *is* not unavailable to-day is unwanted.

Of course, if forced, it is certain that some of us will feed necessity a bit of ingenuity. But

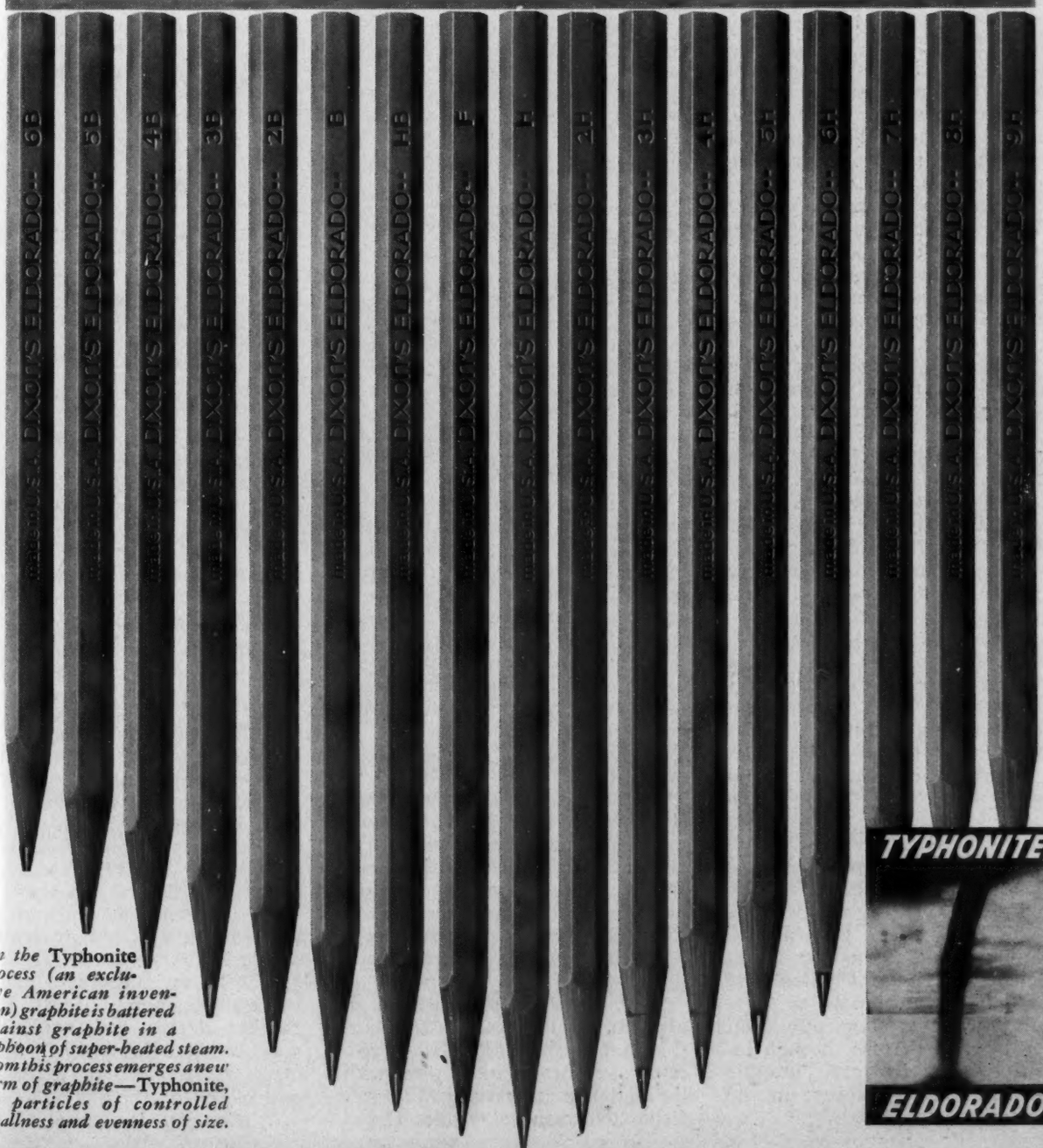
Forced or not, we'll find a way
To build it not like yesterday
For nimble minds will steal or borrow
Matter and methods that to-morrow
Are the steps which lead Men toward
Progress-going ever forward.

In spite of all arguments, regarding accessibility, transportation, proximity of workers' homes to office, etc. Congress voided all reasonableness and allowed the War Department to proceed with plans for the world's largest office building (to house 40,000 employees) to be erected across the Potomac in Arlington County, Virginia — on ground that was set aside for future expansion of the world famous Arlington Cemetery. If desecration is the right word, then the erection of this mammoth workhouse can be termed only that. Besides, the answer to the transportation problem of needed roads, bridges, and buses will only be found in additional costs in fares and taxes to the greatest number of employees who live and will

(*Continued on page 42*)

America Preferred

American workmanship, methods and materials have produced a pencil that declares the American artist's permanent independence of foreign supply. Product of **Typhonite*, the finest dry lubricant known to science, Eldorado pencils are second to none in uniformity, strength and smoothness of leads whose opaque lines produce the perfect blueprint. We cordially invite artists, architects, designers, engineers and draftsmen to compare Dixon's *Typhonite* Eldorado pencils with the finest Europe ever produced.



**In the* Typhonite *process (an exclusive American invention) graphite is battered against graphite in a typhoon of super-heated steam. From this process emerges a new form of graphite*—Typhonite, *its particles of controlled smallness and evenness of size.*

PENCIL SALES DEPARTMENT 167-J9, JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY, N. J.

(*Continued from page 12*)

continue to live in the District. Why does Congress deliberately flaunt its power in the face of facts and public opinion? Or has somebody put a locomotive in the lobby?

Real estate operators in Virginia, quick to take advantage of any given situation, are promoting from the enlarged point of view. Their perspective does not cover a small community but rather a new city built around this colossus. Furthering their scheme is the fact that the Navy Office Building, on a nearby site, is now nearing completion. And its potential home-buying employees run into the thousands. Local radios blare their wares—6 rooms, a bath and a half, sound construction, and "designed for your comfort and pleasure by *Louis R. Moss*—one of Washington's better architects in the small house field." Eureka—an architect's name mentioned over the radio. But on a commercial—is it ethical or are we still tied down to a professionalism in which the ethics are only as good as the individual?

Walt Fredericks drops around to visit and give out about his boss' Embassy enlargements. Embassy work is apparently hard to get but *John J. Whelan* seems to have the proper entrée. And speaking of Embassy work brings to mind a story we heard recently. About two years ago work was not too plentiful for private architects here (or elsewhere). One of Washington's best, *Harry F. Cunningham,* F.A.I.A., was fortunate. He was commissioned to do an Embassy for the then peaceful German government. Apparently sketches were prepared and approved and working drawings started, when the world was shocked by the Nazi-vasion of Poland. Under forced draft goes Harry F. to his contract department, pulls out his remuneration reminder, promptly deposits same in waste-basket and undoes his contract with a letter of no regrets. RED

DEFENSE EXPOSITION

A comprehensive presentation of industrial and commercial activity on the defense program will be staged in the Grand Central Palace, New York, September 20 to October 18, as the Civilian and National Defense Exposition. It is planned to educate the public on the subject of defense through interesting exhibits and graphic demonstrations of its part in the program.

SYRACUSE CONVENTION

Architecture in the national defense program, the influence of post-war conditions on the profession, small house and speculative building, architectural services and legislation will be discussed at the 1941 convention of the New York State Association of Architects which will take place at the Hotel Syracuse, Syracuse, N. Y., October 16 to 18. Feature of the convention will be an exhibit of building materials.

On the final day of the convention there will be a joint luncheon and meeting of delegates and representatives of the Central New York chapter, A.I.A.

President of the state association is James W. Kideney, of Buffalo, and Professor L. C. Dillenback, of Syracuse, is general chairman of the convention. Members of his committee are William P. Crane, Charles R. Ellis, Merton E. Granger, Kirk Helm, Paul Hueber, Melvin L. King, Hawley E. McAfee, and Thomas L. White. Mr. White is head of the Syracuse chapter of the state association.

DESIGN SCHOOL

Its fall semester for day and evening sessions will open on September 23, according to an announcement from The School of Design in Chicago, 247 E. Ontario St., Chicago; L. Moholy-Nagy, director. The school trains designers and architects by a method whereby workshops and classroom work are integrated.

The problems assigned are chosen to fit the student to meet the challenge of new techniques and material, according to the prospectus. There are two and four year courses for designers; a six year course for architects. Evening sessions are also provided. Courses give essential workshop and classroom subjects covering six major fields.

BAERMANN TO CRANBROOK

The Cranbrook Academy of Art, Bloomfield Hills, Mich., has appointed Walter Baermann as head of its new Department of Industrial Design. Mr. Baermann was the founder in 1937, and director until this summer, of the California Graduate School of Design at Pasadena.

A graduate of the University of Munich, Mr. Baermann has been in this country since 1928. His American experience includes work with the design organizations of Joseph Urban, Norman Bel Geddes, Henry Dreyfuss, Howe and Lescaze. He has been educational director of the Springfield (Mass.) Museum of Fine Arts, served as consultant to Boston and Worcester (Mass.) art museums. Since 1937 he has been in private practice in Los Angeles and Pasadena.

A.I.S.C. SESSION

The 1941 Convention of the American Institute of Steel Construction has been scheduled October 14-17 at The Greenbrier, White Sulphur Springs, West Virginia. Details of the Convention plans will be announced later by *V. G. Iden,* A.I.S.C. Secretary.

FEDERATION CLASSES

The Federation Technical School, 3 Beekman St., New York, operated jointly by the metropolitan chapters of the Federation of Architects, Engineers, Chemists, and Technicians, announces the opening of its seventh year as a cooperative non-profit, post-graduate school for architects and engineers. Among the regular courses to be given will be the usual review courses in preparation for the State license examinations. A special course on the Building Code is expected to attract unusual interest. Registration begins September 8th.

TEXAS CONVENTION

The second annual convention of the Texas Society of Architects will be held in Dallas, October 2nd to 4th, at the Baker Hotel. Several eminent architects from other states have been invited to address the convention.

A varied scheme of social entertainment intermingled with interesting business sessions has been arranged. An exhibition of building material products will be held.

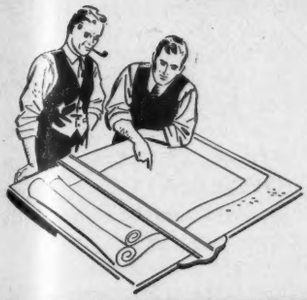
INDUSTRIAL SPECIALISTS

The Federal Civil Service examination for Industrial Specialist has been amended to remain open for receipt of applications until further notice, according to a recent announcement from the United States Civil Service Commission, Washington, D. C. The commission points out that the national defense program has need of men with experience in many fields.

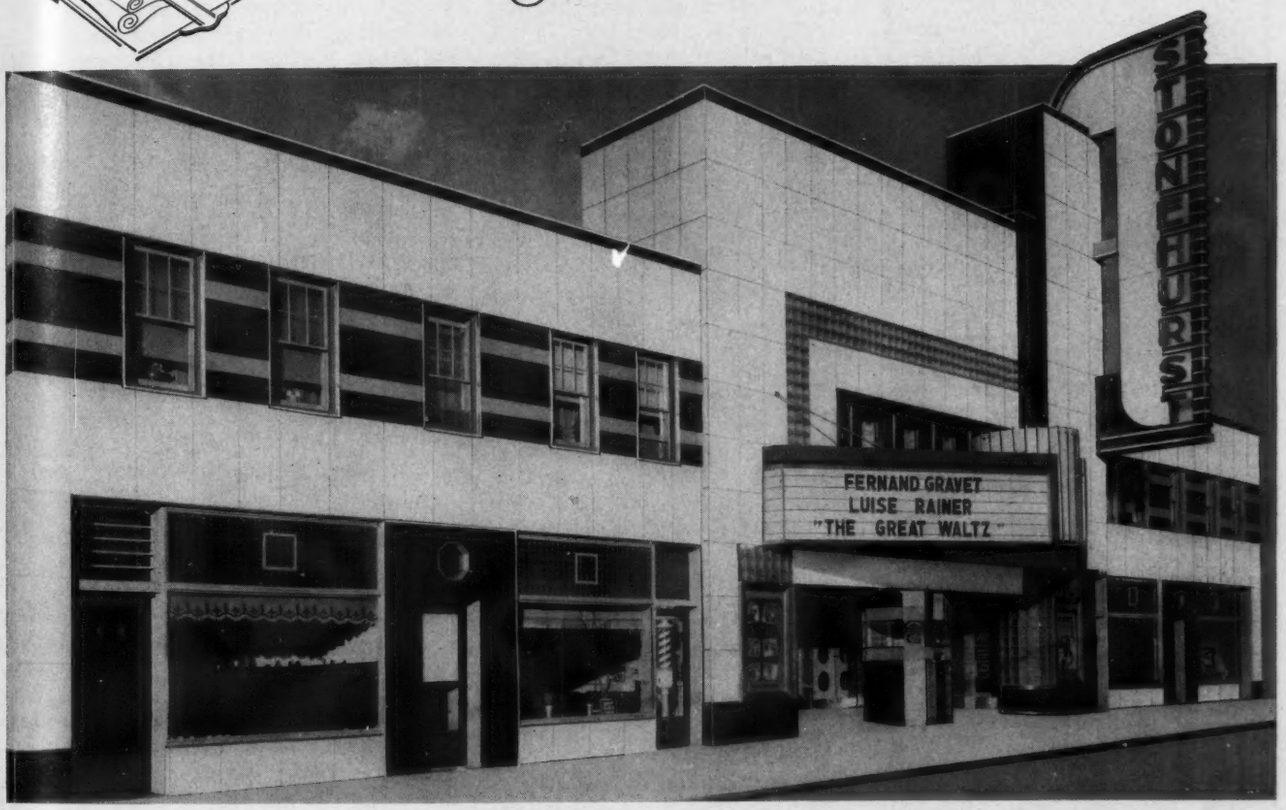
Salaries range from $2,600 to $5,600 in various grades and no written examination is given. Further details and applications may be had from Civil Service offices at any first- or second-class post office.

(*Continued on page 62*)

How to be sure



a good design produces as good a store front



Architects: Thalheimer & Weitz

WHEN you design a store front, you design it to do a specific job . . . to draw business and boost profits for your client. Yet the best design in the world can result in only a mediocre finished front, unless the design is executed with quality materials.

That's why so many architects standardize on Pittco Store Front Products when it comes to building the fronts they design. These products are meant to be used together. They have proved their consistently high quality and versatility on thousands of American Main Streets. They can be counted on to produce as unified, harmonious and sales-building a front as you originally projected on paper.

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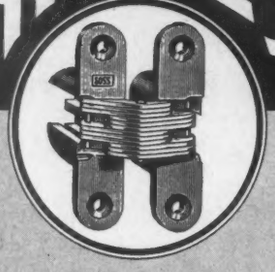
Is Enhanced by This
ULTRA MODERN DETAIL
THAT PERMITS FLUSH,
UNBROKEN INTERIOR SURFACES

SOSS
INVISIBLE
HINGES



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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

SAXE WELDED ERECTION SYSTEM—Comprehensive manual and recommended engineering practice on the use of the Saxe erection seat and clip to produce an easily-fabricated and erected job for the assembly of steel frames. The 8½ x 11 spiral-bound book, 42 pp., is replete with detailed drawings of various welded connections assembled with Saxe seats and clips, welded steel specifications, and a guide, "The Welder's Trouble Shooter," published by Westinghouse. J. H. Williams & Co., 400 Vulcan St., Buffalo, N. Y.

ZURN LAVATORY TRAPS—A.I.A. File No. 29-C-4. Folder on bath and lavatory traps. Specifications and construction details included. 6 pp. 8½ x 11. Included also is the Draindicator, a pipe sizing and specification chart, to aid in calculating size of drainage lines for various types of installations. J. A. Zurn Mfg. Co., Erie, Pa.

G E CONDENSING UNITS.—A.I.A. File No. 30-f. Reference manual for architects and engineers covering General Electric Freon-12 condensing units for air conditioning and general refrigeration applications. Included are specifications, dimension and outline drawings, performance and engineering data, etc. 56 pp. 8½ x 11. General Electric Co., Air Conditioning and Commercial Refrigeration Dept., Bloomfield, N. J.

SHOWER CABINETS—A.I.A. File No. 29-H-3. Its Bathe-Rite shower cabinets are presented in a 12 page, 8½ x 11 catalog No. 4141 by Milwaukee Stamping Co., Milwaukee, Wis. Construction and installation details are included.

WATERPROOFING PASTE—A.I.A. File No. 3-B-4 or 7-A-2. By adding zilicon to its waterproofing paste, Truscon Laboratories, Detroit, Mich., has improved its product by adding to it an element that makes it possible to use less water in mixing concrete and still maintain proper workability. This is described in a six page, 8½ x 11 folder.

W. A. RUSSELL & CO. (WARCO) MOISTURATOR. — Folder giving detailed description of the construction and operation of a newly-developed automatic humidifier for use on steam, vapor, hot water or warm air heating systems. Engineering data is included. 4 pp. 8½ x 11. W. A. Russell & Co., Bridgeport, Conn.

WORTHINGTON - CARBONDALE EQUIPMENT FOR BUILDINGS AND INSTITUTIONS. — Bulletin WP-1099-B27 describes and illustrates a complete line of air conditioning and refrigerating equipment suitable for a wide range of applications. Construction data, sizes, capacities, etc. 28 pp. 8½ x 11. Worthington Pump & Machinery Corp., Harrison, N. J.

FABRICATION OF ALLEGHENY STAINLESS STEELS.—Publication B109, Rev., 2-6-141, presents general suggestions covering the various fabricating operations for Allegheny Ludlum stainless steels. Brief descriptive data is included on both chromium nickel and straight chromium stainless steels. 28 pp. 8½ x 11. Allegheny Ludlum Steel Corp., Pittsburgh, Pa.

SQUARE D DIGEST.—Digest No. 126, replacing Digest No. 125, dated Sept. 1940. Condensed catalog containing listings and the latest prices of many Square D products, including safety switches, service equipment, multi-breakers and other circuit breakers, panelboards, motor control and pressure switches. 76 pp. 8½ x 11. Square D Co., 6060 Rivard St., Detroit, Mich.

TEN-LOX STAIR TREAD—A 4-page, 8½ x 11 folder from The National Bronze & Aluminum Foundry Co., Cleveland, Ohio, discusses the use of Ten-Lox anti-slip treads and tiles in commercial and industrial buildings wherever safety is a factor. It may be installed on existing surfaces. Ten-Lox is made of long-wearing materials with abrasive grits that penetrate through the entire thickness of the casting.

(*Continued on page 52*)

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that any service voluntarily preferred by three out of four people will please your clients

• In recent building surveys, 75% of washroom users with a preference for toilet tissue gave it to *ScotTissue.* You can use this preference to satisfy your clients, no matter what type building you're planning. In service, ScotTissue has the superior softness and strength that make it a favorite with men and women alike. And ScotTissue provides an economical service, for it is packaged to be long-lasting. Scott Paper Company, Chester, Pa.

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ScotTissue

HILLYARD'S Penetrating Seal #21

Seals all wood floors
LEAVES NO SURFACE SURPLUS!

Hillyard's Penetrating Seal #21 is a scientific formula that penetrates deeply into the wood cells, uniting them into a unit that will take severe punishment without showing traffic wear, it is being used with excellent results in classrooms, armories and industrial floors . . . in fact any area subjected to heavy traffic . . . to reduce maintenance costs and protect floors with a minimum amount of labor.

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Penetrating Seal #21 is easily applied with sheepskin applicator and becomes an integral part of the floor surface, leaving a smooth, dull finish that can be quickly waxed to a gleaming finish if a bright surface is desired. Better results are obtained when burnished in with the Hillyard "Steeltonian" steel wool machine.

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There is a Hillyard Maintenance Engineer in your locality ready to give advice and supervise the application of Hillyard Products to insure you and your clients a traffic resisting floor.

SEND FOR YOURS

SPECIFICATION CARDS SENT **FREE** . . .
SECTION 17, PAGE 34
IN SWEET'S CATALOG

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...DISTRIBUTORS HILLYARD CHEMICAL CO. ... ST. JOSEPH, MO. ...

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 50)

BUILDERS' HARDWARE—A.I.A. File No. 27-B. This 97-page, 8½ x 11 catalog is divided into three sections, illustrates and describes door closing and door hanging devices and thresholds; casement hardware and transom operators; floor check and overhead door check parts. Oscar C. Rixson Co., 4450 Carroll Ave., Chicago, Ill.

FEDDERS ALL SEASON AIR CONDITIONING COILS.—Bulletin 392. Useful data book for architects and engineers giving complete working data on air conditioning coils for use with refrigerants, cold water, hot water and steam. Dimension drawings, physical data, capacity ratings, information on high capacity thermostatic expansion valves, etc. 46 pp. 8½ x 11. Fedders Mfg. Co., Buffalo, N. Y.

CLOTHES CLOSET FIXTURES—Brochure 541 describes the K-Venience line of such clothes closet fixtures as towel racks, tie racks, hat and coat racks, etc. Knape & Vogt Mfg. Co., Grand Rapids, Mich.

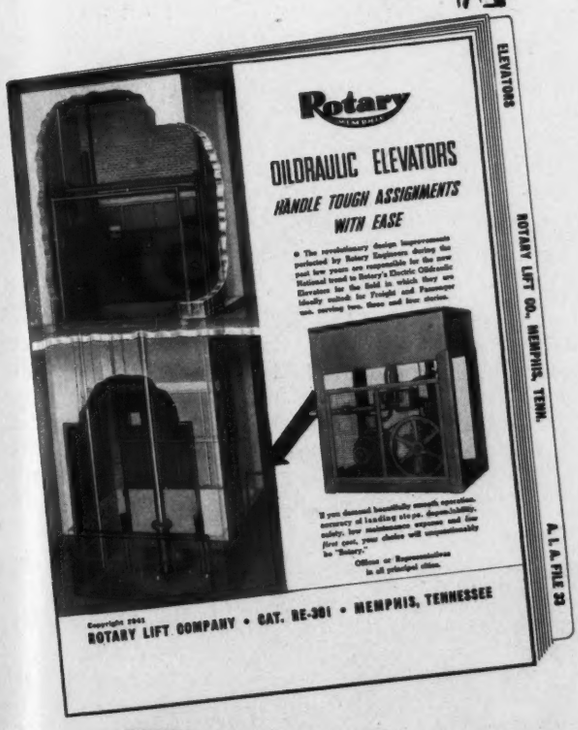
STEAM CONDUIT BULLETIN—Bulletin No. 381, from H. W. Porter & Co., Newark, N. J., illustrates and describes its Therm-O-Tile underground steam conduit system for permanent protection, support, and insulation of underground pipe lines—hot or cold. 8 pp. 8½ x 11.

SIMPLIFYING LUMBER SPECIFICATIONS.—Folder containing certified lumber standards chart prepared to assist the architect in specifying species and grade correctly for any familiar application. 8½ x 11. The Durable Woods Institute, 155 E. 44th St., New York, N. Y.

FENESTRA HEAVY CASEMENT - TYPE STEEL WINDOWS.—A.I.A. File No. 16-e-1. Useful reference manual for architects covering a line of windows constructed of heavy, steel casement sections for use in all types of fine buildings. Included are specifications, construction features, standard and special hardware data, details, types and sizes, sections, etc. 32 pp. 8½ x 11. Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich.

(Continued on page 54)

What- NO PENTHOUSE?



SHE'S ONLY FOOLING, MORTIMER!
SHE DOESN'T WANT A PENTHOUSE!

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Who had built her? She had been built, tried and tested, designed and re-designed—*on paper*—long before the first mechanic touched her. Pencils and Paper, Slide Rules, T-Squares, Angles and Curves, these were the tools that built her. Engineers, designers and draftsmen—these were the men that created her, planned her, made her "building" possible.

To these men, the creators of Industry, whose minds and pencils hold the key to "Building", Frederick Post brings a broad choice of products refined through research and specifically adapted to the quickened tempo of today's designing engineer.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(*Continued from page 52*)

HARDWARE FOR COMMERCIAL ENTRANCES—A complete line of entrance trim for use on all types of commercial jobs is presented in Catalog K570 from P. & F. Corbin, New Britain, Conn. 36 pp. 8½ x 11. Included is a new line of push bars and door pulls, new thresholds, armored front locks. Many items are kept in stock for immediate delivery.

STOCK MILLWORK ITEMS—A new 8½ x 11, 32 page book, "Open House," contains photographs, sketches, plans, and isometric drawings showing how specific planning problems can be solved by means of stock doors, windows, frames, and other woodwork items of Ponderosa pine. The book is published by Ponderosa Pine Woodwork, an association of Ponderosa pine stock woodwork and lumber manufacturers, 111 W. Washington St., Chicago.

CARPET MANUAL – "Nearly Right Won't Do in Contract Carpets" is a 34-page manual for executives explaining the various carpet weaves most commonly used in contract work, their advantages and disadvantages, their uses and comparative costs. Issued by Alexander Smith & Sons Carpet Co., 295 Fifth Ave., New York, it is 9 x 12 in size, shows typical installations and actual samples of three types of Alexander Smith carpets, with magnified photos of their surface, cross section, and back.

STEELCRETE HANDBOOK – Essential data on standard sizes of Safe-T-Mesh, and drafting room standards showing construction details for partitions, window and door guards, other expanded metal meshes are given in a spiral-bound, 90-page, 8½ x 11 catalog from Consolidated Expanded Metal Companies, Wheeling, W. Va.

FLUORESCENT LIGHTING – Tips on residential fluorescent lighting are given in a new booklet, A-3939. The manual is divided into four parts, gives facts about fluorescent lighting, its advantages, presents a question and answer section, and do's and don'ts of fluorescent lighting in the home. Priced at five cents a copy. Westinghouse Lamp Division, Bloomfield, N. J.

(*Continued on page 56*)

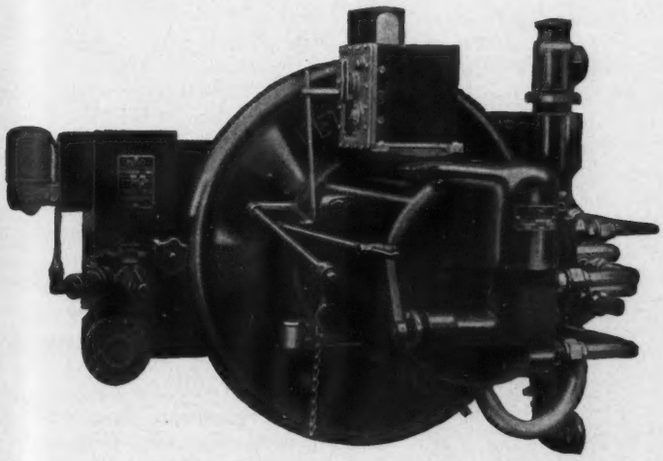
An Engineer's opinion of

OIL BURNING SYSTEMS

in relation to defense construction necessities

Oscar Vogelbach, of Newark, New Jersey, is widely known as an engineer of experience and achievement. He has acted as engineer of many outstanding structures, including Mravlag Manor, U.S.H.A. Project at Elizabeth, N. J., Titeflex Metal Hose Co., and many public buildings, in which Petro Burners are installed. He has this to say of the Petro equipment:

"My experience shows that Petro Burners operate with the minimum of repair and are thoroughly reliable in performance, that they eliminate labor cost, and that the Petro organization service leaves nothing to be required, factors which are particularly pertinent in our defense program. Cost reduction has occurred in heating plants where I have used the Petro Oil Burning Systems, whether No. 5 industrial fuel oil is used or the heavier and cheaper pre-heated No. 6 oil. I appreciate the engineering ability which has produced the compact, efficient design of their equipment."



In referring to the defense program, Mr. Vogelbach did not mention the prompt deliveries of Petro equipment, but it appears to be an important consideration.

A large part of Petro's current production of Industrial burners is going into defense construction: Powder mills, armament makers, machine tool manufacturers, and many of the secondary or intermediate producers.

Known performance and dependability are probably primary reasons for these selections of Petro, but the immediate availability of the equipment and engineering service are also vital factors in present conditions.

This prompt delivery is still possible on any orders for Petro and everything possible is being done to continue the quick shipments which have long been recognized as being typical of Petro.

CAPACITIES: to 145 gal. per hr.—487 boiler h.p.—68,000 sq. ft. steam E.D.R.

FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEET'S

Petro Industrial Burners for Automatic operation with preheated No. 6 oil, or with No. 5 or lighter oils, are available in eight sizes, Models W-2½ to W-9 inclusive. Each burner is a self contained assembly of motor, fan, pump, rotary cup atomizer and interlocked air and oil adjustments.

In the use of preheated No. 6 oil, the Petro Thermal Viscosity System is an integral part of a Petro installation, insuring reliability of operation and fuel economy.

Semi-Automatic and Manually controlled Model W Burners and "Mechanical" type units are also available to meet circumstances which do not require automatic operation.

To the Architect in domestic building, Petro offers a complete line of burners for use with existing heating plants and complete oil fired boilers and winter air conditioners.

Petro's Engineering Division will gladly answer questions. The Petro Industrial Equipment Catalog will be sent promptly on request.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(*Continued from page 54*)

BUILDING PRODUCTS BULLETIN OF THE PRODUCERS' COUNCIL—Bulletin No. 39, issued by the Producers' Council, Inc., 122 E. 42nd St., New York, from which copies may be secured, contains information on building products and services of the following members:

Bastian-Morley Co. Inc., LaPorte, Ind.—Crane—Basmor gas-fired boilers; the Torpedo Tank gas water heater; the Royal Booster self-contained water heater.

Burnham Boiler Corp., Irvington, N. Y.—Cabinet type Radiant radiator.

Carrier Corp., Syracuse, N. Y.—50M, self-contained Weathermaker, a water-cooled air conditioning unit for general air conditioning applications; Type 51D2 Weathermaker room model, a portable unit for large homes, apartments, offices, and small stores.

Crane Co., 836 S. Michigan Ave., Chicago, Ill.—The All-American sink for continuous counter installations; Series 14 boiler for small homes.

General Electric Co., Schenectady, N. Y.—Announcing a new dustproof all-metal enclosure for its AE-1A and AE-1B air circuit breakers.

International Nickel Co. Inc., 67 Wall St., New York—Presenting applications of the new No. 35 monel metal for all types of installations.

National Adequate Wiring Bureau, 155 E. 44th St., New York—Bulletin on "How To Safeguard Investment with Adequate Wiring Standards."

National Fireproofing Corp., Pittsburgh, Pa.—Construction details and technical data on the Natco structural clay tile floor systems for use in commercial and industrial buildings.

National Mineral Wool Association, 1270 Sixth Ave., New York—Bulletin from the Bureau of Mines, U. S. Department of Interior, advocating home insulation as conservation and defense measure.

The Okonite Co., Wilkes-Barre, Pa.—Technical data on Hazakrome type SN small diameter building wire, Underwriter approved.

Otis Elevator Co., 260 Eleventh Ave., New York—Signal control replaces car-switch control in new and existing installations.

Pecora Paint Co. Inc., 318 Venango St., Philadelphia—Suggested uses of Pecomastic, a pointing compound, for use with structural glass, acoutical tile.

Pullman Mfg. Corp., Rochester, N. Y.—Presenting the Pullman unit sash balance, a mechanical device for counter-balancing double-hung windows.

Richmond Screw Anchor Co. 816 Liberty Ave., Brooklyn, N. Y.—Description and illustrations of the simplicity and flexibility of its Tyscru clamping device.

The Stanley Works, New Britain, Conn.—A full line of Dillon jamproof sash pulleys for various uses and installations.

Tremco Mfg. Co., Cleveland, Ohio—Discussion of the many causes which affect glazing failures.

METAL MOLDINGS—A.I.A. File No. 23-i. A 16 page 8½ x 11 catalog from I. Beck & Sons, Inc., 353 E. 20th St., New York, gives specifications and construction details of its new Alumin-Edge for exterior and interior mouldings available in a variety of shapes to fit various thicknesses of surface materials.

FLEXICORE ROOF AND FLOOR SLABS—An 8 page catalog, 8½ x 11, describing its Flexicore reinforced concrete floor and roof slabs, reinforced with Prestressed steel reinforcements, is available from Price Bros. Co., 1932 E. Monument Ave., Dayton, Ohio.

WINDOW IDEAS FOR SMALL HOUSES—Currently available are the third and fourth in a series of four portfolios showing the application of steel casement windows to various types of homes. Five plates in an 8½ x 11 folder. Detroit Steel Products Co., 2280 E. Grand Blvd., Detroit, Mich.

CENTRAL PAINTS ON THE JOB—A.I.A. File No. 25. This 6 x 9 booklet is pasted on an 8½ x 11 card for convenience in filing, tells what may be used on a particular type of surface, and how to use it. The 45-page book has much pertinent information and data on painting and its applications. Central Paint & Varnish Works, 63 Prospect St., Brooklyn, N. Y.

KITCHEN CABINET UNITS—A series of six 8½ x 11 folders on the Calumet and Cabranette kitchen cabinet units was issued recently by Dwyer Products Corp., Michigan City, Ind. Calumet units come in various sizes to fit all kitchen needs. The Cabranette unit is a self-contained one, contains a built-in refrigerator unit, sink, electric burner unit, other conveniences.

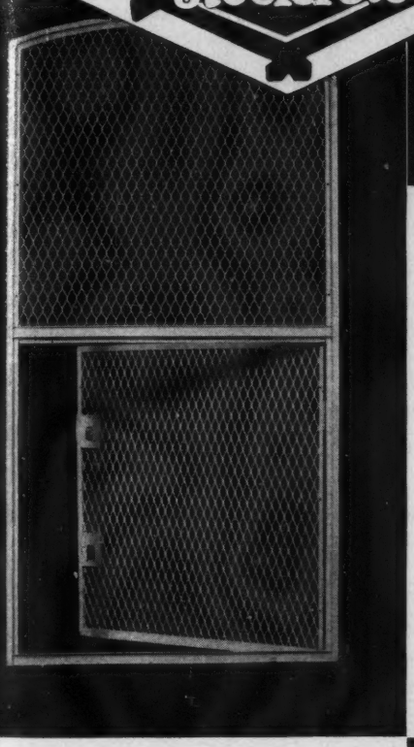
(*Continued on page 60*)

IN *Defense Projects*

EXPANDED METAL

Steelcrete

PROVIDES NEEDED PROTECTION *at Low Cost*



BECAUSE of its great strength, light weight, low cost, and adaptability to many uses, Steelcrete Expanded Metal is being extensively used in defense projects for protection against theft, glass breaking, illegal entry or exit, or acts of sabotage. The rigid strands of Steelcrete Expanded Metal cannot be pried apart and will not unravel. Meshes with openings of various sizes for any type of protection are available. Suitable fittings are also provided for quick installation of window guards, skylight guards, partitions, lockers, and other types of enclosures.

Write for New 92-Page Handbook on Expanded Metal

Steelcrete Expanded Metal window guards are made in several styles to harmonize with any architectural design. They are finished in baked enameled paint in any color desired for use on office buildings, industrial plants, apartment houses or other types of structure. The style shown here is a combination fixed and hinged window guard, made of 1½" No. 9 Steelcrete Safe-T-Mesh and Jumbo Bar frame.

Enclosures made of Steelcrete Expanded Metal can be quickly erected and easily altered should plans change later. The open mesh of Steelcrete makes for better ventilation and better light distribution. This strong, fire-safe fabric is ideal for use in partitions, locker-rooms, storage rooms and tool-room enclosures as shown at the right. All necessary accessories, including hinges, frames and vertical supports are available.

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TOP VIEW

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The area covered by a WING Revolving Unit Heater is slowly swept by the heated air discharged by the outlets which move through an arc of 360° covering every direction of the compass successively.

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A prominent architect advises clients: "WING Revolving Unit Heaters would be worth installing if they cost *twice as much.*" (But they don't! In most cases they cost less.)

One reason for recommending WING Revolving Heaters is the recognition that employee comfort and satisfaction make it imperative that plants have the fresh, live, invigorating atmosphere in winter and summer which only WING Revolving Unit Heaters provide.

Write for copy of new Bulletin HR-1

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WING Revolving
UNIT HEATERS
VENTILATING FANS • EXHAUSTERS • BLOWERS • TURBINES

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 56)

BATHROOM CABINETS—Morton Mfg. Co., 5105 W. Lake St., Chicago, Ill., has available a display kit which helps the architect visualize how Morton bathroom cabinets will look in the bathroom. Included in the kit are: an illustration of a bathroom wall, with accessories in scale, and three sets of picture cards showing the various cabinet models in the firm's line. To visualize how the cabinet will look, simply place the picture card on the wall illustration. Each picture card has on the reverse side such information as model number, mirror size, wall opening.

WOOD FINISHES—An illustrated 8½ x 11 folder from Franklin Research Co., 5134 Lancaster Ave., Philadelphia, discusses the Chekit method of treating floors, and types of floors to be treated. Chekit is a wood finishing product for preserving, waxing all types of floors.

CORRUGATED WIRE GLASS—A.I.A. File No. 12-J. Seventeen pages of construction details of corrugated wire glass for skylights, saw-tooth, and side wall construction, are contained in a 20-page catalog, 8½ x 11, from Pennsylvania Wire Glass Co., 1612 Market St., Philadelphia.

ODOR ABSORBERS—The Dorex Division of W. B. Connor Engineering Corp., 114 E. 32nd St., New York, has issued a six page, 8½ x 11 circular on its unit odor absorbers. Featured are illustrations, together with construction and operation details. Equipment ranges from small types for home and office use to larger types for hotels, hospitals, industrial applications.

PORCELAIN ENAMELING—Illustrations of store fronts, service stations, theatres, and restaurant buildings using porcelain enamel for architectural purposes, are given in an 8½ x 11, 24-page loose leaf catalog from Davidson Enamel Products, Inc., Lima, Ohio. Specifications and structural details are also listed.

MAY OIL BURNER—Dramatically illustrated is the patented Gerotor Pump in a new 4-page, 8½ x 11 folder from May Oil Burner Corp., Baltimore, Md., on its Model NSJ oil burner. The pump delivers a constantly-controlled oil flow to the atomizing nozzle, is said never to wear out. A page of the folder is devoted to the firm's patented fuel-saving devices.

DOUBLE CAPACITY
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IMPERIAL "Floatless" SUMP PUMP
Reg. U. S. Pat. Off. and Canada

—and you get this added capacity at no extra cost to your clients

● The new high capacity Imperial "Floatless" Sump Pump actually handles twice the volume ordinarily handled by sump pumps of similar horsepower and price.

This greatly increased pumping capacity gives you two very important advantages: (1) It enables you to double your safety factor on ordinary installations. (2) It enables you to specify a low cost pump in many cases where a higher priced one formerly was necessary to provide sufficient capacity.

Along with these advantages you also get all the superior features of Imperial pumps, including "floatless" automatic electric control and brass-bronze construction.

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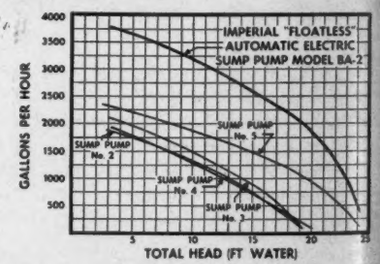
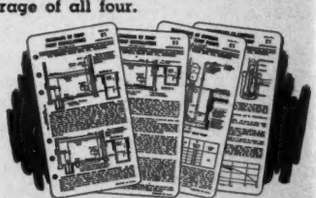


● The new Imperial "Floatless" Sump Pump and four leading competitive makes were tested by the research foundation of a well known technical institution. The results showed that the Imperial "Floatless" has a discharge capacity 70% greater than the best of the other four pumps, and 115% greater than the average of all four.



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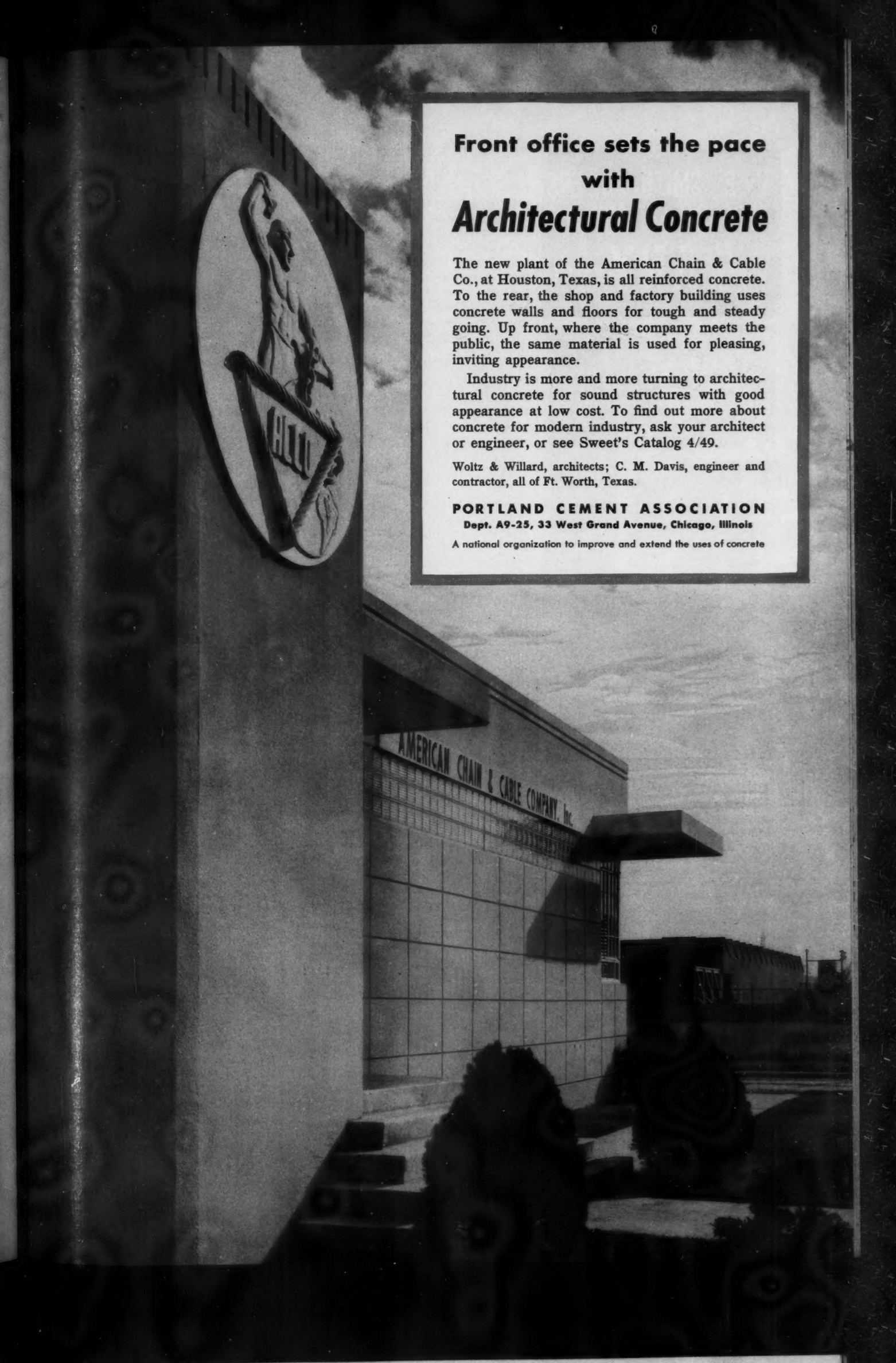
have been brought up to date to match the higher ratings. You will find these detailed studies of sump pump applications helpful in your work.

Write for your set
You will also find specification information in Section 27, Catalog 30 of Sweets.

THE IMPERIAL BRASS MFG. CO.
541 South Racine Avenue, Chicago, Illinois



Front office sets the pace with *Architectural Concrete*

The new plant of the American Chain & Cable Co., at Houston, Texas, is all reinforced concrete. To the rear, the shop and factory building uses concrete walls and floors for tough and steady going. Up front, where the company meets the public, the same material is used for pleasing, inviting appearance.

Industry is more and more turning to architectural concrete for sound structures with good appearance at low cost. To find out more about concrete for modern industry, ask your architect or engineer, or see Sweet's Catalog 4/49.

Woltz & Willard, architects; C. M. Davis, engineer and contractor, all of Ft. Worth, Texas.

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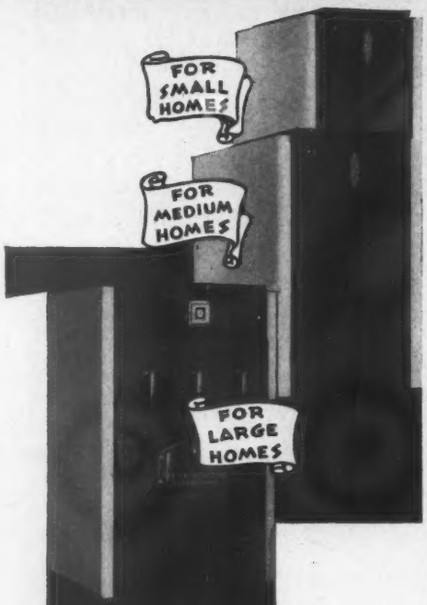

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IN this year of fuel shortages, what boilers are you recommending? Are you puzzled over whether to specify a special oil burning unit, or a hand-fired boiler?

If so, H. B. Smith is your best bet, for while Smith "Mills" boilers have been designed primarily for automatic firing, they can be easily converted and will operate efficiently when hand fired.

Why? Because Smith "Mills" exclusive vertical water tube design provides more of the all important prime heating surface than does any other boiler of equivalent size . . . a principle that insures high heat absorption, regardless of the fuel burned . . . and, incidentally, LOW fuel consumption.

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BEAUX-ARTS COURSES

The Beaux-Arts Institute of Design, 304 E. 44th St., New York, recently announced its program for the coming season. The Department of Sculpture, under the directorship of *Gaetano Cecere,* will begin classes on September 29th. Morning sessions in life and antique modeling will be open to both men and women students; evening sessions to men only. Monthly competitions will be conducted.

At the invitation of the Director, distinguished sculptors will give instruction and criticism. On the Committee on Sculpture are *Gaetano Cecere,* Director and Chairman; *Edward McCartan, Paul Manship, Alfred Geiffert, Jr., Joseph H. Freedlander, William Van Alen.*

The Department of Mural Decoration, under the direction of *Edward Laning,* mural painter, will offer four competitive problems for solution.

Otto Teegen, Architect, who continues as Director of the Department of Architecture, has obtained programs for a series of competitive problems from architects in twelve different states from Massachusetts to California. Because of the scope of interest, as evidenced by the wide range of architects cooperating, the training prepares a student for many types of problems.

CARROLL GREENOUGH

Carroll Greenough, known for his work in France during a long residence there, died in Asheville, N. C., on August 18th. He studied at the Ecole des Beaux Arts in Paris and practiced there for more than twenty years. During the World War he designed many hospitals in France, was later associated with *Whitney Warren,* architect of the restored Louvain Library. As the final architect of the new American Church of Paris, his work supplemented that of *Ralph Adams Cram.* Since 1934 Mr. Greenough had worked on various projects of the United States housing program.

INDUSTRIAL ARCHITECTURE

There will be offered in the coming year a five year course in Industrial Architecture, and an option in Industrial Architectural Design in the last year of the regular five year course in the Department of Architecture, University of Pennsylvania, Philadelphia, Pa.

J. Roy Carroll, Jr., Assistant Professor of Design, and executive chairman of the design staff, has been appointed to coordinate the academic with technical phases of the course.

COLOR AND THE WOMAN

Some of the glamour of the fashion world has been drawn upon by the United States Gypsum Co., 300 W. Adams St., Chicago, to bring a new, personal color approach for its Texolite paint before the woman who buys. The firm, in dramatizing its paint, advises women to paint walls with colors that compliment her. To help them do this, the company is providing a color ruler.

The ruler is a pocket-size card which shows all the colors of the spectrum as they shade to near black or near white. Crossed off are the color areas to be avoided; left open are those areas best suited for the type indicated. And there are five types—blond, brunet, redhead, silver-gray, and the All-American or brown-haired type. With the Texolite Color-Type-Guide, it is possible to tell at a glance which is the proper tint or shade for the women in the house.

Just as the living habits of the family act as a guide to the architect in planning the house, so the firm feels that a woman's coloring should be a guide to the paint colors which the architect specifies for the house.

Texolite paint is odorless, dries in a few minutes after application. Subtle or bold, deep or pastel color effects are made possible by the use of a colorless binder.

"Considerable criticism is being directed by the architectural profession at some of the governmental departments for the method employed in obtaining architectural services in connection with the defense program. While in most cases, architects and contractors are selected simultaneously, considerable work is being given to contractors who are asked to furnish the plans as well as do the construction work. It is the latter method which is objected to by the architectural profession.

"While most of the problems are of the industrial type for which often the engineer serves rather than the architect, experience has shown that even in the simplest and most straightforward problem a capable architect will easily prove his worth."

Albert Kahn, F.A.I.A.
Detroit

WILLIAM M. KENDALL

That scholarly architect whose buildings combined an elegance of proportion with a great mass, *William Mitchell Kendall,* senior member of the firm of *McKim, Mead & White,* New York, died on August 8th. Born in 1856 at Jamaica Plain, Mass., he inherited his aptitude for the classics from his father, an educator of note, and his mother, a well-known astronomer. He was graduated from Harvard in 1876; then studied architecture at the Institute of Technology, Boston, for two years. After a year and a half's study in France and Italy, he entered the office of McKim, Mead & White, Architects, as a draftsman in October, 1882.

He was largely responsible, during this period, for the architectural details of such buildings as Madison Square Garden, Morgan Library, Washington Arch. In 1906 he became a member of the firm, designed such buildings as the New York Post Office, American Academy in Rome, McKinley Memorial in Niles, Ohio; Academy of Arts and Letters, New York; Arlington Memorial Bridge, Harvard School of Business, Ira Allen Memorial Chapel at the University of Vermont, and the Olin Memorial Library at Wesleyan University, Middletown, Conn. A great number of these designs were won in competition.

At the time of his death, Mr. Kendall was a member of the National Academy of Arts and Letters; Fellow of the American Institute of Architects; Trustee and Vice-President of the American Academy in Rome; and Associate Member of the National Academy of Design.

An editorial in the August 11th issue of the *New York Herald Tribune* eulogized this noted architect whose death "broke a link with a great tradition."

"AFTER DEFENSE, WHAT?"

Under this title the National Resources Planning Board, Washington, recently issued a booklet discussing post-defense planning. Pointing out that "full employment is the key to national prosperity as well as individual welfare, and that the individual can produce little working alone," the introduction to the pamphlet stresses the "organization for maximum production on the basis of full employment. Doing the job pays the bill. The central problem is not money, it is manpower, resources, and organization. Finance was made for man, and not man for finance."

The Board has been instructed by the President to collect and analyze all constructive plans for significant public and private action in the post-defense period insofar as these have to do with the natural and human resources of the nation. Lines of action to be explored and developed include plans for demobilization, for public works and activities, plans with industry, expansion of service activities including the development of hospitals, schools, and community facilities for recreation, culture, and art, plans for security, for financing, and plans in the international scheme.

NATIONAL GALLERY

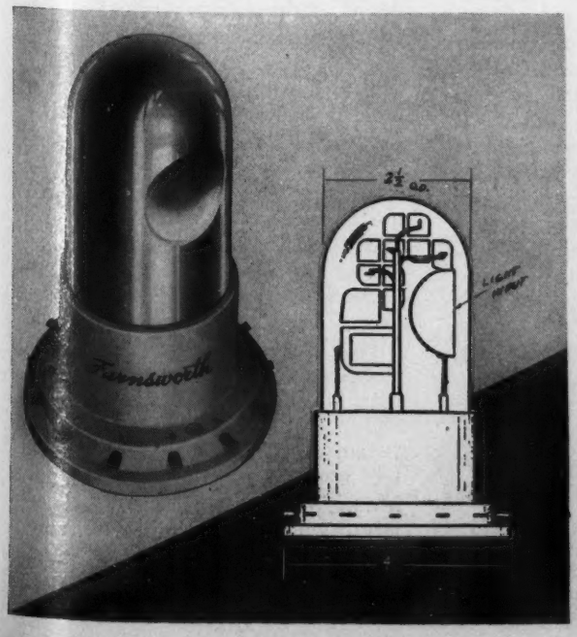
The architectural credit for our presentation last month of the National Gallery of Art in Washington was intended to reflect the circumstances of the design of the $15,000,000 building—although we were aware that it is more customary to refer to the architects as *John Russell Pope,* Architect; *Eggers & Higgins,* Associate Architects. At the time the late Albert Mellon announced his $8,000,000 (*sic.*) gift to the nation the drawing of the National Gallery design by John Russell Pope reproduced last month on page 497 was published in LIFE (February 15, 1937). Obviously the design was comprehensively developed as the project was carried forward, subsequent to the decease of Mr. Pope, and it is to Eggers & Higgins and the members of their organization that credit should go for the completed building. Landscaping of the plot was designed and executed under the supervision of *Alfred Geiffert.*

PUBLIC WORK RESERVE

Objective of the recently-created Public Work Reserve is to encourage state and local governments to prepare future long-range programs of public work so that the nation may have well-coordinated and planned projects, prepared to meet any urgent need for expanded public services and facilities, as a factor in providing additional employment at a time of emergency.

"The project has been established to prepare an inventory and

(*Continued on page 66*)



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HIGGINS

(*Continued from page 65*)
develop a reservoir of all needed and useful public work," points out *E. C. Smith, Jr.*, national director. "It is our intention to secure and maintain a nation-wide listing of all potential public work, with developed plans and cost estimates, reviewed and revised from year to year, to permit prompt prosecution of the work when and if funds for financing the work have been provided, either from local or Federal sources."

At a recent three-day meeting in New York, *Jacob Baker*, Coordinator of Public Work Reserve, said it would be necessary to compensate for the $30,000,000,000 armament program in order to keep the nation's productivity total next year at $110,000,000,000. He believed the country would spend $10,000,000,000 yearly on its armed forces. Private industry would be able to make good $10,000,000,000 of the assumed deficit, leaving $10,000,000,000 to be taken up by public works. (In a single year, 1937, the sum devoted to public works in the United States was, he said, $8,500,000,000.)

STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS

IN BOYS TOWN

Illustrated is a recent Dormitory of the Father Flanagan "Boys Town", for which Leo Daley, Omaha, Neb. was the architect, and The Parsons Construction Co., also of Omaha, the General Contractors. Pecora Calking Compound was applied by Bissell Weatherproofing Co. of Kearney, Neb., to permanently seal building joints against moisture, dust and drafts. Present day specifications provide for adequate weather protection by calking all exposed joints. No better material can be used for this purpose than PECORA. Its record of performance since its introduction 33 years ago has been such as to warrant the fullest confidence of architects and builders everywhere. Pecora Calking Compound will not dry out, crack or chip when properly applied, and it will form a lasting bond between all building materials, similar or dissimilar.

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CLASSICAL REVIVAL IN NEW YORK CITY

The Museum of the City of New York recently concluded an exhibition of so-called Classic Revival Architecture featuring the XIX Century in New York, which parallels that of the Gothic Revival held there a year ago. These two stylistic currents,—the Classic and the Medieval,—dominated the Revivalist Movement in XIX Century American Architecture as, indeed, they also did in European Architecture.

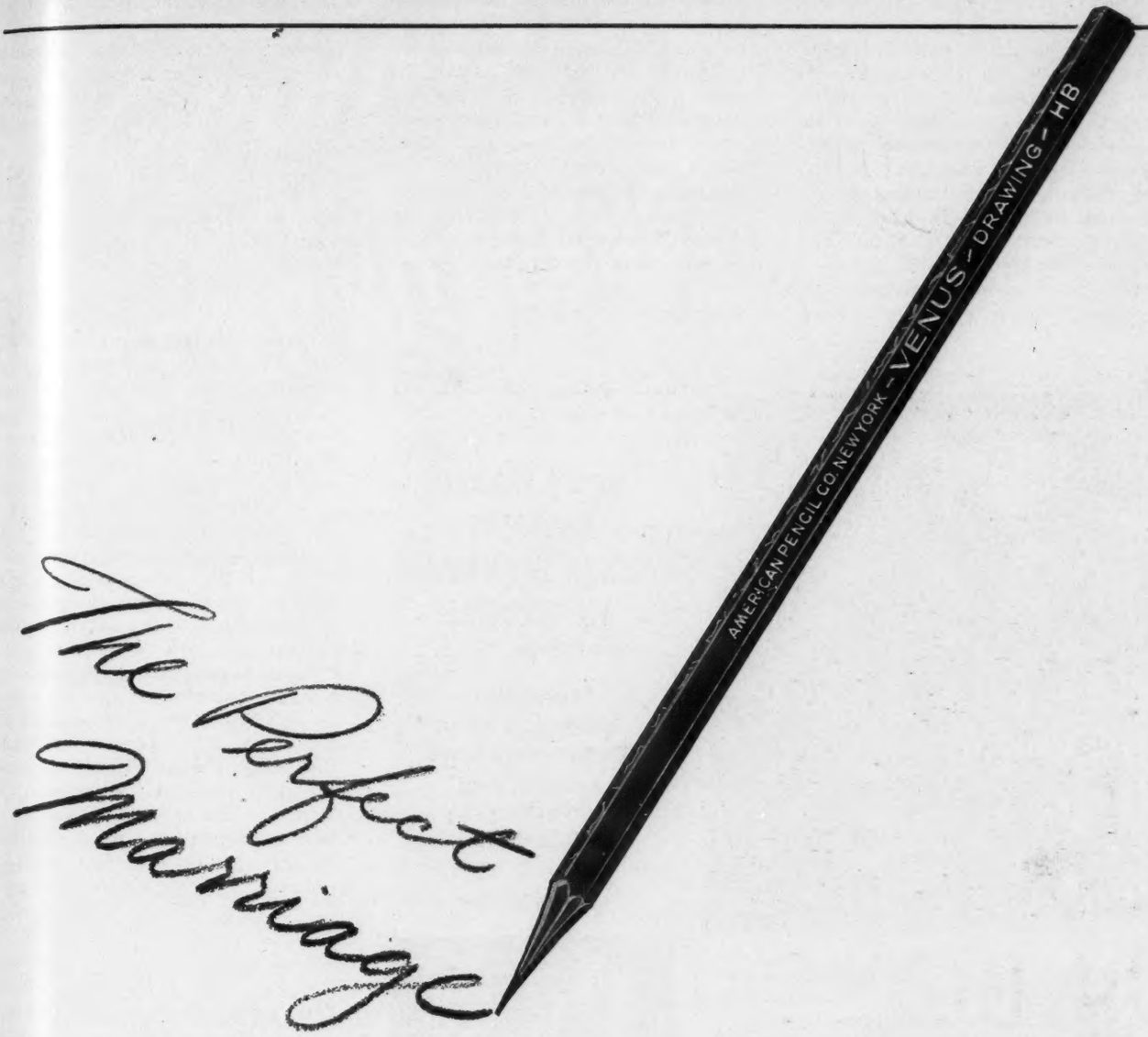
The New York of about 1800, it must be remembered, seems *not* to have been the provincial mirror of contemporary English life which Boston, Philadelphia, Baltimore, or Charleston were, but rather, a more *cosmopolitan* little port, having a bustling and extremely heterogeneous population. Its recent *emigrés* from the French Revolution mingled with earlier Hugenot, British, and Dutch Settlers, so that the social tone remained more receptive to a constant stream of new-comers than in the other ports. Then, too, the opening of the Erie "Canawl" in 1825, and the Harlem Railroad a decade later, put New York in touch with a wider hinterland, and by way of becoming the commercial if not the intellectual hub of our universe!

During the first quarter of the XIX Century, our Classic Revival builders took their cue from Roman models, using architectural handbooks illustrating them as guides. Such architects as *John McComb, Jr., Josiah Brady,* and *Martin Thompson* erected pleasing structures, using a modicum of Roman orders and Adamesque detail, culminating stylistically in the Merchants' Exchange on Wall and William Streets by *Thompson* and *Brady* in 1827.

But the professional activity here in New York of some competent French Architects and Engineers, since the 1780's, had given a strong Gallic flavor to some of the City's principal buildings. *Major L'Enfant* had remodeled the Federal Hall on Wall and Nassau Streets in 1789, just prior to Washington's inauguration there as first President, and added both the Roman Ionic portico and the Rococo chancel to St. Paul's Church on Broadway. A highly-gifted architect and his brothers, as yet "dark horses," named *Mangin* had collaborated with *McComb, Jr.* upon designing the City Hall, from 1804-12, making it a most impres-

(*Continued on page 68*)

Why more ARCHITECTS and ENGINEERS buy Venus than any other 10¢ pencil



● Could you define a "perfect marriage"? Smooth, consistent, reliable. To be sure, it must be all of those.

Well, in VENUS lead the graphite and the clay are married—perfectly. It's that same constant smoothness, consistency and reliability that will make you happy with VENUS Drawing Pencils.

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AMERICAN PENCIL COMPANY, 502 Willow Avenue, Hoboken, N. J.

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(*Continued from page 66*)

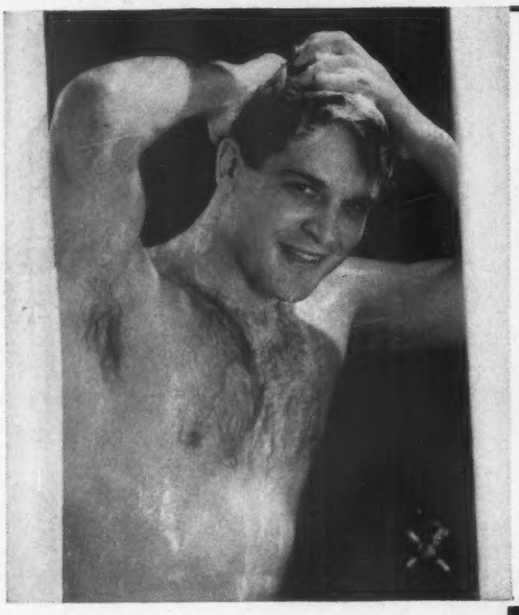
sive example of Louis XVI Classicism.

By 1825, and for considerably more than the second quarter of the Century, the Classical Revival took on a Grecian aspect which would leave an indelible stamp not only upon the architecture of New York City, but also upon that of the nation as well, particularly in regard to public buildings. As might be expected, the new stylistic current was led by new blood. A remarkable group of architectural purists centered about the firm of *Town & Davis,* founded in 1829, and *Ithiel Town's* already influential Library housed in the office.

Herein, lay the source of the justly-famous Greek Revival in New York: that *new* combination of intellectual curiosity seeking literary fortification, and a budding American way of life, based upon fervid Democracy, surging Romanticism, Continental expansion, and political optimism. All previous American styles of building had been reflections of European counterparts, but this approach to architecture was based *for the first time* and primarily upon the recognition by Americans of the American Way of Life with all its needs, and peculiarities, and differences. This is the significant factor of the Greek Revival. This marks the departure of provincial traditionalism and heralds the arrival of native ways. It is not the stylistic mannerisms of the Greek Revival which affect American Architecture so deeply as it is this recognition and definition of purely American phenomena at a time when we were about to embark upon tremendous expansion in every direction.

It was the principal concern of this Greek Revival School of Architects, centering about New York, that they should evolve a truly *native* type of structure to house truly *native* ways. That they chose Grecian temples as models has less significance than what they tried to do in order to accommodate satisfactorily our new demands of a Domestic, Civic, Commercial, Educational, and Ecclesiastical variety. Here is a new conception of light, of air, of comfort, of space, of utility which arises directly from the dictates of a new social, political, and economic order. Gone are the feeble imitations of aristocratic palaces and here at hand are the direct if brutal marts of trade, the halls of republican legislature, the stark places of individual worship, and the classless abodes of an industrial society. Modern America is here in embryo, less complex perhaps, but utterly recognizable!

ROGER HALE NEWTON



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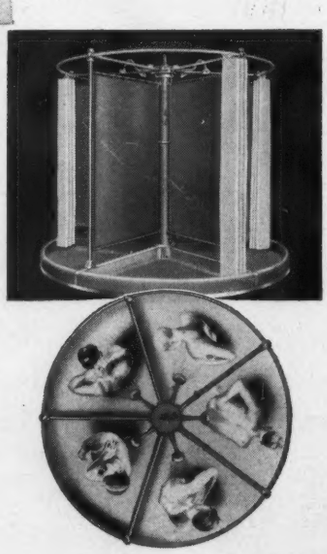
Multi-Stall Showers Reduce Installation Time —cut piping connections by 80 per cent

Dirt and tiredness are washed away quickly in the modern Bradley Multi-Stall Showers that so many plants have installed during the last 10 years . . . Showers make the worker fit for an evening of comfort, fit for the next day's work—and improve morale . . . Bradleys are made in three- and five-stall models easily installed in new or existing buildings with minimum of piping connections. A 5-stall Shower requires no more piping connections than the conventional single-stall shower—one supply for hot water, one for cold, and one drain—three piping connections instead of 15.

Layout suggestions by our experienced Washroom Consultants will help you in planning economical washrooms. BRADLEY WASHFOUNTAIN CO., makers of the well-known group wash fixtures—Bradley Washfountains—2277 W. Michigan Street, Milwaukee, Wis.



5-in-a-group shower

BRADLEY MULTI-STALL SHOWERS

THE MART

MRS. WILLIAM H. BRAINERD, 10 Upland Road, Wellesley, Mass., wife of *William H. Brainerd,* Architect, who died recently, wishes to dispose of her husband's file of PENCIL POINTS to anyone willing to pay the sending charges.

CHARLES KREIMER, 522 Channing St., Cincinnati, Ohio, has almost all copies of PENCIL POINTS from 1923 to 1940. His son, Eugene, who worked with Garber & Woodward, Cincinnati, died recently, and the elder Kreimer wishes to dispose of the copies. Please state price.

WALTER R. SHINER, *Architect,* 1115 Cortez St., Coral Gables. Fla. wants copies of the following: *Architectural Record* – January, 1938, to February, 1941; *American Architect* – January to May 1930; February, 1931; February, April, June, August, 1934. Please state price.

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MANUFACTURERS' DATA WANTED

COLE AND MADSEN, *Architects,* 30 Bay St., Staten Island, N. Y. (Data for complete A.I.A. file, and data for residential work, for drafting room; also samples.)

ALBUQUERQUE INDIAN SCHOOL, *Construction Department,* Albuquerque, N. M. (Catalogs on building materials and equipment items.)

MILLWORK CENTER, INC., *Millwork Contractors,* 118 N. Third Ave., Mount Vernon, N. Y. (A.I.A. catalogs on fireplaces, veneers, Mengel board, metal lath.)

SHOW WIN-DO DISPLAY, INC., *Display and Exhibit Designers,* 27 Sheriff St., New York. (General data.)

KEITH HINCHCLIFF, *Extension Architect,* Extension Service, State College, Miss. (Complete data, especially on material for farm structures.)

MICHAEL KANE, *Draftsman,* 2880 Washington Blvd., Cleveland Heights, Ohio. (Data for complete A.I.A. file.)

THADDEUS M. GALISZEWSKI, *Chief Draftsman,* 1314 Carson St., S. S., Pittsburgh, Pa. (General data, and complete A.I.A. data.)

W. P. GLOBIS, *Draftsman,* 10020 Aberdeen St., Chicago, Ill. (Data for complete A.I.A. file.)

EDWARD HESS, *Designer and Specification Writer,* 1260 Winnemac Ave., Chicago, Ill. (Samples, and data for complete A.I.A. file.)

WILLIAM T. LEONARD, *Draftsman,* 112 Park St., Statesville, N. C. (Data and samples, and data for complete A.I.A. file.)

WILLIAM F. APPLETON, *Draftsman,* Elm Hill Road, Nashville, Tenn. (Data to replaced burned A.I.A. file.)

THE COTSWOLD STUDIO, *Architectural Designers,* Oxford, N. J. (Data covering special and standard equipment and material used in construction and equipment of buildings devoted to the use and manufacture of fast-burning and explosive products for national defense.)

HENTON BUILDING CO., *Designers and Builders,* 790 E. 260th St., Euclid, Ohio. (Data on residential buildings for A.I.A. file.)

WALLACE F. HOLLADAY, *Draftsman,* Gordonsville, Virginia. (Data and samples, and data for complete A.I.A. file.)

CHARLES GRABLE, *Designer,* 110 Walnut Place, Syracuse, N. Y. (Data and samples for A.I.A. file.)

L. C. EVANS, *Architect,* 2218 Avenue "C," Washington Hotel, Galveston, Tex. (Material for complete A.I.A. file)

EDGAR V. ULLRICH, *Architect,* 7608 Girard St., La Jolla, Calif. (Data for complete A.I.A. file).

FREDERICK L. FRYER, *Architect,* 3903 Livingston St., N.W., Washington, D. C. (Data for complete A.I.A. file.)

MARSHALL SHAFFER, *Architect,* Architectural Section, United States Public Health Service, 25th and "E" Sts. N. W., South Bldg., Washington, D. C. (Data for drafting room use and for complete A.I.A. file.)

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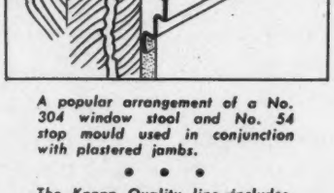

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PERSONALS

L. C. EVANS, *Architect,* is opening a new office at 2218 Avenue "C," Washington Hotel, Galveston, Tex.

JOHN MELZA SITTON, *New York Artist and Educator,* has been appointed Assistant Professor of Fine Arts at Cornell University, Ithaca, N. Y., beginning next fall. He will have charge of classes specializing in creative research in Medieval and Renaissance techniques, will also hold classes in elementary drawing and painting where design and function will be stressed in the visual arts.

FRANK J. SINDELAR, *Architect,* has opened an office for the practice of architecture at 512 Blount Building, Pensacola, Fla.

EDGAR V. ULLRICH, *Architect,* and EDGAR V. ULLRICH, JR., have opened an office for the practice of architecture at 7608 Girard St., La Jolla, Calif.

W. CHESTER BROWNE, *Architect,* Yale '41, has opened offices for the practice of architecture at 120 Milk Street, Boston, Massachusetts.

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COMPETITION ANNOUNCEMENTS AND RESULTS

ESSAY WINNERS

Prizewinners and finalists cited for mention in the Fine Arts Competition conducted by *The Atlantic Monthly* magazine have been announced as follows: First Prize of $1000, given by the trustees of the Waid Educational Fund of the A.I.A., to *John A. Kouwenhoven,* of Dorset, Vermont, for his essay, "Arts in America."

The Second Prize of $500, also furnished by the Waid Fund, went to *George Boas,* of Johns Hopkins University, for his essay, "Art in Education." Mr. Boas' essay and the essay of *Miss Mildred Whitcomb,* of Chicago, which received Honorable Mention, will appear in later issues of the magazine.

BRUNNER SCHOLARSHIPS

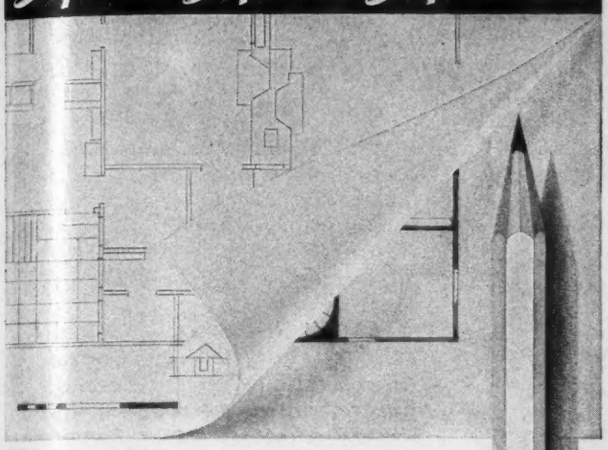
The Architectural League of New York, 115 E. 40th St., New York, in pursuance of the terms of the Will of Emma Beatrice Brunner, has created the Arnold W. Brunner Scholarships. Approximately $1,800 is available now for one or more scholarships, and all members in all classes of membership in the League in good standing on October 15 are eligible for these awards.

Awards are to be made for the purpose of "promoting and encouraging accomplishment in the arts and professions represented in the membership of The Architectural League of New York and to render such arts and professions of greater use to the community." It is hoped that the subjects proposed will be in the nature of original and creative work rather than merely in historical or archaeological research, and that they constitute a mature contribution to the chosen field.

Applications should be made to the Committee by means of written submission of a detailed account of the subject to be studied or undertaken, supported by evi-

(Continued on page 76)

Speed Speed Speed



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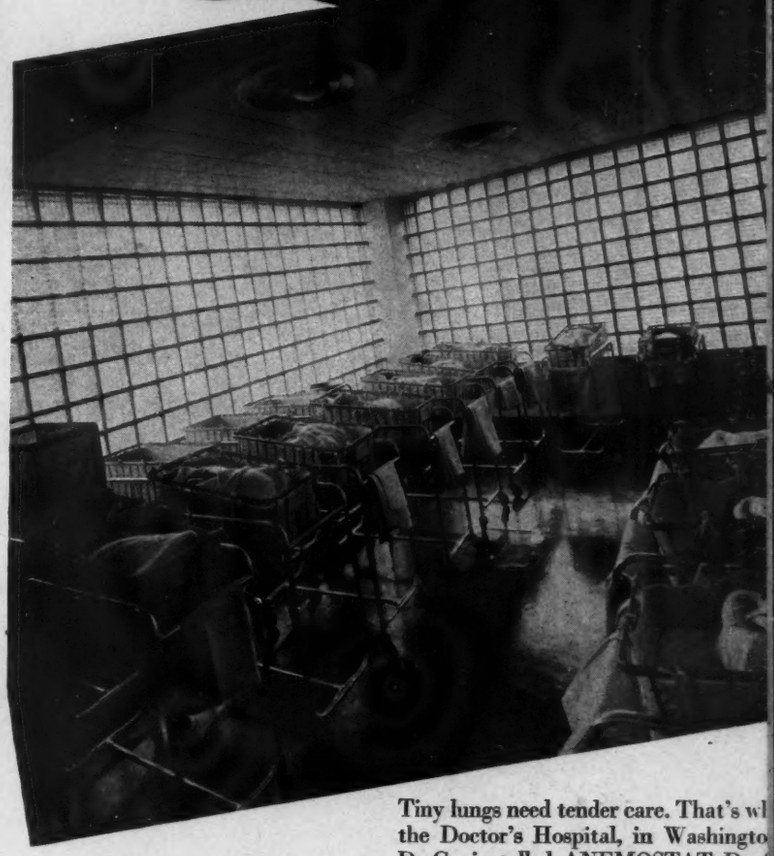

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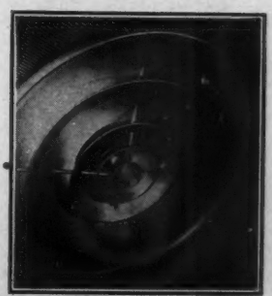

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(*Continued from page 74*)

dence of its value, and of the candidate's qualifications to undertake the study or work. Announcement of the award or awards, if warranted, will be made about the third week in November. Application blanks will be sent on request.

The League's Committee on Scholarships and Other Funds is made up of: *Arthur Loomis Harmon,* chairman; *A. F. Brinckerhoff, Margaret French Cresson, Dean Cornwell, Henry F. Bultitude, Harold W. Rambusch,* and the following *ex officio* members: *Frederick J. Woodbridge, Frederick G. Frost, Jr., Fletcher Collins.*

JEFFERSON MEMORIAL

The Thomas Jefferson Memorial Commission will meet sometime during the month of September, at which time the three models now in the competition for the selection of a statue of Thomas Jefferson, to be placed in the Thomas Jefferson Memorial, Washington, D. C., will be viewed.

Skylights THAT INSULATE, TOO!

THERMAG BLOCKS SAVE HEATING & COOLING COSTS
. . . and provide even distribution of light

The sectional sketch above shows how "Thermag" semi-vacuum blocks with "Magnalite" diffusing design are used in skylights such as the one illustrated.

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Further details in Sweet's; or your inquiry addressed to 2139 West Fulton Street, Chicago, will be welcome and have our prompt attention.

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THIS REALM, THIS ENGLAND, *edited by Samuel Chamberlain ($3.75, 179 pages of illustration, 7" x 9"—Hastings House, 67 West 44th St., N. Y.)*

MARTHA'S VINEYARD, *a camera impression by Samuel Chamberlain ($1.25, 73 pages of narrative titled illustrations, 6" x 7½"—Hastings House, 67 West 44th St., N. Y.)*

THE COAST OF MAINE, *A Photographic Panorama by Samuel Chamberlain ($2.00, 101 Pages of illustration, foreword by the author, 6" x 7½"—Hastings House, 67 West 44th St., N. Y.)*

GREAT RIVER OF THE MOUNTAINS: THE HUDSON—*Photographs and prose by Croswell Bowen, Foreword by Carl Carmer ($3.75, 96 pages, 9½" x 12½"—Hastings House, 67 West 44th St., N. Y.)*

Hastings House has contributed four pleasant books to this restless world. Samuel Chamberlain, with carefully selected material, is responsible for "This Realm, This England," "Martha's Vineyard" and "The Coast of Maine"; Croswell Bowen for "Great River of the Mountains, The Hudson." These four books of fine pictures will stir your yen for travel or serve to recall pleasant journeys already accomplished.

"This Realm, This England" is a fine contemporary presentation in etching, drypoint, sketch, and photograph of all that is England. Our chief regret is that each reproduction could not have a full page, for the artists represented are truly masters of their media. *James McBey's* "Mersea; Sunset" and *Henry Rushbury's* "The Debtor's Prison—York" are but two that suffer from lack of space. *Joseph Pennell* contributes a delightfully impressionistic study of "Park Lane" and a coarse pencil sketch of Newquay that are notable. Among *Sir Murhead Bone's* many etchings are "The Mystery Ship," "Ready for Sea," and "Piccadilly Circus Night" introducing the section on London. The photographers, unfortunately, are not credited for their fine contributions, which really round out this record of England, "the citadel of a valiant

(*Continued on page 78*)

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which accounts for the number of drawing rooms being equipped with the "Hallowell" Steel Stool shown below, because it means *better work, more of it* and *freedom from fatigue*. It's just a darned good investment.

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Please send me the set of Don Graf Data Sheets announced in Pencil Points.

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(*Continued from page 76*)

race." The division of the material into sections devoted to the cities, the villages, the countryside, the seacoast, the castles and the churches is commendable. *Donald Moffat* in a meaningful introduction keynotes the book with: "Here is the England her people are fighting to preserve, as they are fighting to defend their lives."

Mr. Chamberlain has caught the restful charm of the long and firmly established society which has made Martha's Vineyard its home. His photographs, whether of the rolling countryside, the majestic cliffs that are Gay Head or of the quiet towns, present the Vineyard as an ideally restful retreat. There is the sparkling cleanness of sea air unsullied by the smoke of industry. There is the suggestion of neighborliness, of pleasant "Good Mornings" over picket fences, of quiet Sundays as the inhabitants chat before the gleaming white churches of their forefathers. The frame houses, furnished, no doubt, with the treasure of many successful voyages, have the staid elegance of the prosperous Yankee. There is the ever-present sea and sail, while inland—though less mellow with age—that same quality we find in the English Countryside.

Many visits to the coast of Maine have afforded Mr. Chamberlain the opportunity to record its essence with his camera. From Kittery to Quoddy he has seen the rugged coastline, the skiffs and shacks of simple fishermen, the schooners and mansions of roving captains. Here too are examples of the "Continuous Architecture" of rambling farm buildings, of white painted homes shadowed by ancient elms and maples. Here are tree-shaded vistas; the campus at Bowdoin, the street in Eastport and several others. Here is the vacationers Maine. We look forward to the publication of the remaining volumes in this series of "American Landmarks" by Mr. Chamberlain.

Our own Hudson River has long been famed as one of the really majestic rivers of the world. We who have traveled its banks will appreciate these splendid photographs which trace the river from its source in the Adirondacks to Lower New York Bay. The familiar scenes are well-recorded but the real interest of the book lies in Mr. Bowen's fruitful search for evidences of bygone days. The whole history of the river is recalled, the discovery, the Revolutionary battles, the treason of Aaron Burr, the founding of the Military Academy, the establishment of the landed gentry, commercial exploitation and the industries. Here is the record of the isolated groups of highland people, the Eagle's Nesters, the Pondshiners, the pure Dutch of Gilder's Hollow and the Jackson Whites. Here too against a background of tales that were old when Washington Irving made the Hudson familiar, we see laborers, rivermen, farmers, hunters, and vintners. All of them are but a part of the life of the "Great River of the Mountains"; that part which through time has contributed man-made beauty and occasional ugliness. Here we have a true portrait of the river; one all Americans will enjoy.

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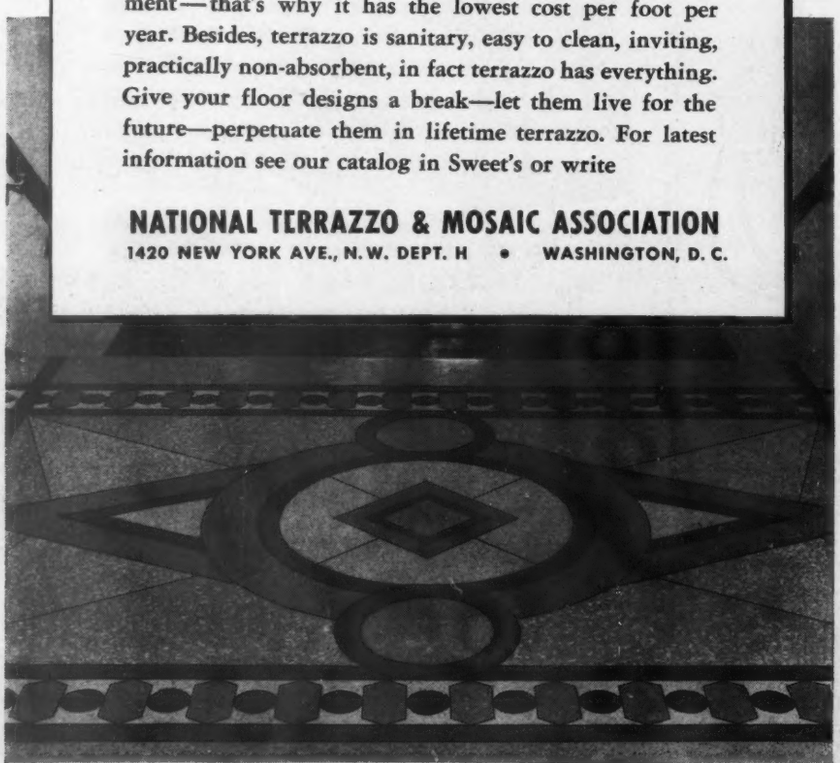

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Q. What company can supply a cold storage door to meet every need?

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Not even an earthquake could appreciably damage these Pittsburgh Steeltex-reinforced Stucco walls.

A hurricane blew this house from its foundation yet the Steeltex-reinforced Stucco came through structurally sound.

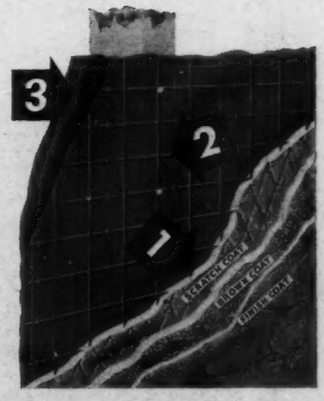
STEELTEX REINFORCES STUCCO LIKE CONCRETE!

For new construction or for remodeling, *Pittsburgh Steeltex* assures a better, stronger Stucco job—a job as crack-free and *permanent* as any other building medium. Experts agree that the success of Stucco depends on the three features that are *all* combined in Pittsburgh Steeltex:

1. Reinforcement like concrete by the complete *embedment* of a rigidly welded network of steel wires in the Stucco.

2. Assured long life by great resistance to corrosion through galvanized copper bearing steel wires, additionally sealed in by the surrounding Stucco to further retard oxidation.

3. Protection against dampness and air penetration by a special double-ply mastic filled waterproof backing that seals out moisture, minimizing frame distortion and consequent cracking.

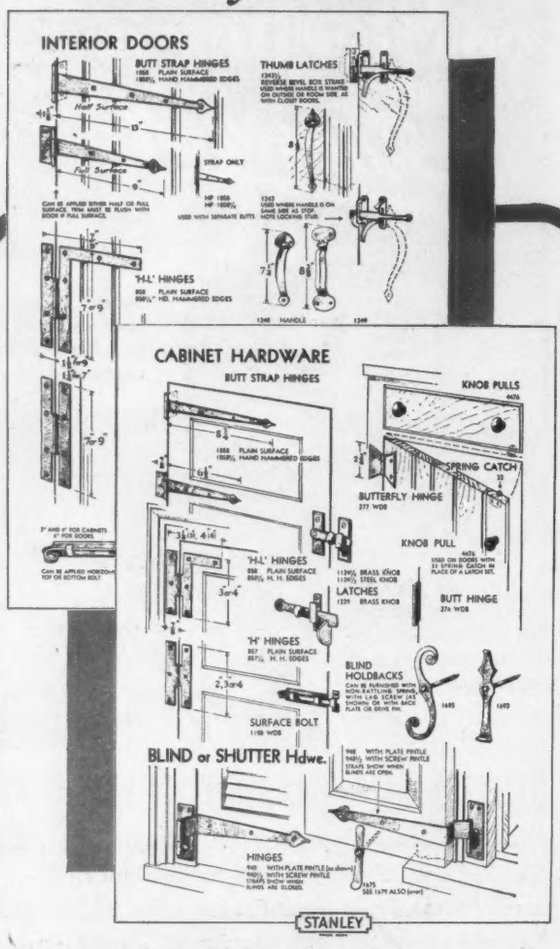


Investigate this superior method of applying STUCCO. Write for literature and technical facts today.

PITTSBURGH STEEL COMPANY
Construction Products Division
1664 GRANT BUILDING · PITTSBURGH, PA.

Pittsburgh Steeltex FOR STUCCO

Whatever Your Specification . . . Stanley Makes It



STANLEY Early American or Colonial Hardware

Hinges, latches, bolts, knobs – all are close reproductions of genuine Colonial patterns. Turned out mechanically perfect by modern machine methods. Low in cost!

The Stanley Early American or Colonial line includes all standard hardware for interior doors, cabinets, blinds, shutters, windows, gates, and garages.

Write For This Special Folder

Folder B141 describes the complete line of Stanley Early American or Colonial Hardware. Gives you drawings, measurements, and application details. It will save you a lot of time making up specifications. Write today for a copy. The Stanley Works, New Britain, Connecticut.

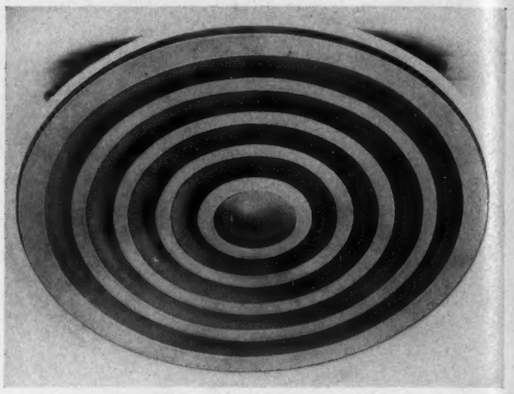
STANLEY

HARDWARE FOR CAREFREE DOORS

NEW PRODUCTS

STAMPED STEEL AEROFUSE OUTLET

Because of the shortage of aluminum, Tuttley & Bailey, Inc., New Britain, Conn., has developed a low-priced, circular ceiling outlet similar in appearance and performance to the standard cast aluminum outlet, but made in sheet steel. Two types of the standard Aerofuse are available, both identical in appearance. No. 5001 is designed for installation approximately flush with the ceiling, while No. 5001-E is used when outlets are to be installed on exposed ductwork. A combination supply and return unit is available for use where simplification of the ductwork is desirable.



The new stamped steel Aerofuse consists of a series of steel rings formed and spaced to provide circular air passages with alternate low pressure areas. Its performance is the same as that provided by the cast aluminum Aerofuse. The steel outlet is furnished in either enamel or electroplate. The standard finish, aluminum prime coat, may be used as a final finish. Method of installation is the same. The new stamped steel Aerofuse outlet is available in a range of sizes sufficient for any installation required.

BOILER FOR SMALL HOMES

Coalsaver, Jr. is a new hand-fired, coal burning boiler for small homes, recently announced by Columbia Radiator Co., McKeesport, Pa. It features an ash-pit water circulation which permits installation on wooden floors. Since it has low water entry ports, it can be used for gravity systems in small homes without basements.

Other features include dust-seal doors, concealed damper and regulator, 4-ply air-cell insulation, large fuel capacity. All models are finished in a two-tone green steel jacket that conceals doors, gauges, etc. It may be had for either steam or water, comes delivered completely factory-assembled.

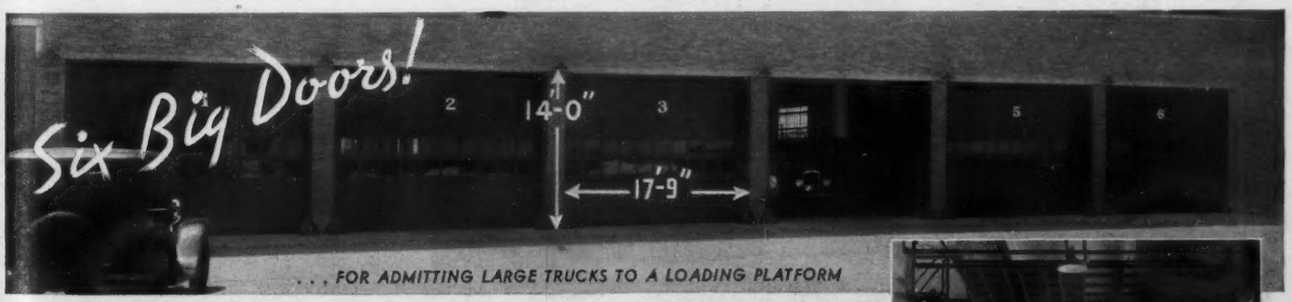
NUTONE DOOR CHIME

Here is a combination which gives the home owner the temperature, humidity, two musical notes to announce guests, and one musical note for the grocery boy. It is the Weatherman model door chime, new in the 1942 line from NuTone Chimes, Inc., Third and Eggleston, Cincinnati, Ohio. The combination two-door chime has an Airguide thermometer and humidity gauge as an integral part of the unit, is finished in baked ivory, has brass-finished tubes.

(*Continued on page 82*)

MARKING telephone outlets *on your plans* suggests specifying built-in conduit to carry concealed telephone wires within walls. This avoids the necessity of exposed wiring. When they're installed during construction, telephone outlets — like electric outlets — cost little.

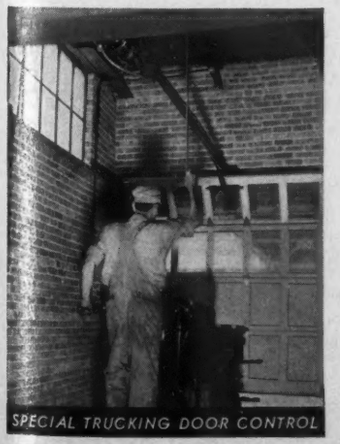
• *You'll find the* **"Architects' and Builders' Service"** *of your local telephone company glad to help in planning efficient telephone arrangements. Call your nearest Bell Telephone Business Office and use this time-saving service.*



. . . FOR ADMITTING LARGE TRUCKS TO A LOADING PLATFORM

FOR LONG-LIFE, LOW-MAINTENANCE INDUSTRIAL SERVICE USE . . .

BARCOL OVERDOORS

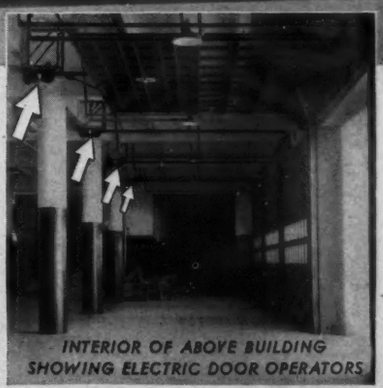


SPECIAL TRUCKING DOOR CONTROL

• Special construction features make the Barcol OVERdoor extremely adaptable to industrial buildings, where large size doors are usually required. Design features, such as roller crank closing action, tailored twin torsion counterbalancing springs, and continuous vertical track brackets, help to provide the easy operation and strength necessary for durability under hard use.

ELECTRIC DOOR OPERATORS AND CONTROLS

These motor-driven units are matched to the door requirements, and can be controlled in a number of different ways. Door operators are also available for swinging, sliding, and steel rolling doors, and for swinging and sliding gates. For further details, send for descriptive literature.



INTERIOR OF ABOVE BUILDING SHOWING ELECTRIC DOOR OPERATORS

BARCOL

LOOK FOR THIS MARK OF QUALITY

SEE . . . our new 12 page Catalog in 1941 SWEET'S

REPRESENTED IN PRINCIPAL CITIES

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IN CANADA A. B. Ormsby Co. Toronto

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● NOW . . . to save your time on flooring problems, Bruce has assembled a complete new file on Streamline, Block, Plank, and Strip floorings, and Floor Finishing. This new data file gives you stimulating ideas plus helpful information on all types of hardwood floors. Includes comprehensive book on floors published by the Department of Commerce. Hundreds of colorful illustrations show a wide variety of flooring effects . . . in homes, offices, stores, schools, etc. It explains how various types of floors are laid . . . gives complete information on various finishing methods. Get your copy of this helpful new file while our supply lasts. It's FREE! Just mail the coupon!

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Gentlemen: Please send me free copy of new Bruce Data File on hardwood floorings and floor finishing.

Name.....

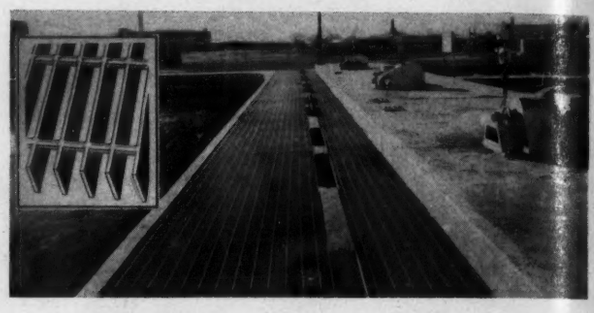
Street.....

City.....*State*.....

(Continued from page 80)

WELDED STEEL GRATING

Safety, rigidity, durability, self-cleaning, and sure-footed travel are claimed for a new line of welded steel gratings developed by Wm. F. Klemp Co., 6611 S. Melvina Ave., Chicago, Ill. Of one-piece

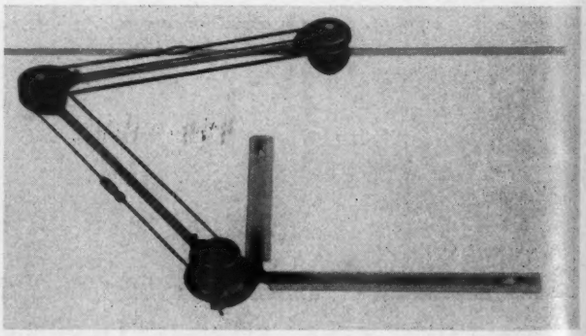


construction, they are suitable for use as passage ways and platforms either inside, outside, or between buildings, and for ramps, stair treads, other needs in industrial and commercial structures.

Gratings are made of hot rolled hexagonal steel bars placed at right angles on top of flat-bearing bars, and electro-welded. Standard grating is made in 24 inch wide panels, in lengths to 35 feet; other widths are also furnished. A "Safe-Load Table" is furnished for bearing depths, and thicknesses to meet requirements.

TRUE LINE DRAFTING MACHINE

In the new True Line drafting machine, Frederick Post Co., Box 803, Chicago, Ill., has built to hair-line accuracy a machine which embodies a protractor, vernier, T-square, scales, and triangles. It



is easily and conveniently operated, comes equipped with "Quick Flick" controls. A flick of the thumb and the scales are released for 15 degrees automatic stops, or for intermediate stops and locking. Again, a flick of the thumb and the scale can be set at any angle with a protractor and vernier reading of zero to zero, eliminating adding and subtracting when the draftsman is engrossed in detail around a focal point in the drawing.

In all True Line models the design permits the use of the instrument with the elbow to the left or right. The protractor may be used at any angle in the complete circle, so that the total area of the board is made accessible. The machine is made of hardened steel.

FOR COMPACT LIVING

Expandor is a new development in line with the current trend toward economy of space in building and housing design. It uses the wasted space behind a door for a variety of conveniences. De-

(Continued on page 84)

Enjoy the Comfort of . . . Modern Drawing Equipment

Get your copy of this new 48 page Hamilton Drafting Furniture Catalog. You can draw in comfort at any of the 26 different styles of drawing tables shown in this new catalog.

Filing equipment that saves time and tracings is fully described in this new catalog. Send for your copy today.

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TWO RIVERS, WISCONSIN

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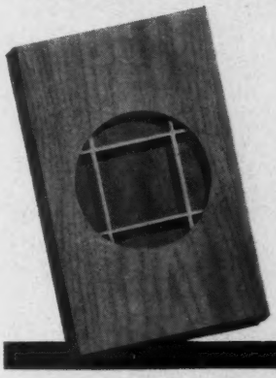
DOORS: NEW LONDONER
HOLLOW-CORE FLUSH DOORS

TO BE USED THROUGHOUT BUILDING

An excellent specification on any architect's sheet! New Londoner Hollow-Core Flush Doors have been used in all sections of the country and on almost every type of building with outstanding success.



Because New Londoners are resin-bonded by the hot plate process and specially sealed to practically eliminate moisture absorption, they will not sag, shrink or warp. Specify New Londoners for every building you design, and you have successfully solved the door problem. New Londoners are shown in Sweets Catalog, or you may obtain details by writing to us.

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NEW LONDON, WISCONSIN

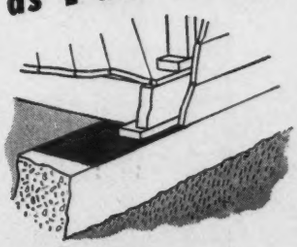
COPPER...

as easily applied as PAPER!

Any workman can put COPPER-ARMORED SISALKRAFT in place—and it costs about ONE-FOURTH as much as 16-oz. rolled copper.

It's an electro-deposited sheet of pure copper, uniform, impervious to moisture — backed up with two layers of wire-tough crossed sisal fibres, two layers of special asphalt, and rugged kraft paper — strong, pliable, won't kink or tear.

COPPER-ARMORED SISALKRAFT makes it possible to use COPPER — a recognized quality feature — in even low-cost construction.



FOUNDATION DAMP-COURSING

One of many practical applications. Write for AIA data file, and samples.

The SISALKRAFT Co.
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COPPER ARMORED SISALKRAFT

A SERIES ON THE USE OF "ARTGUM"—THE ARTIST'S TOOL

3. ERASER DRAWING

The use of "ARTGUM" is by no means restricted to the making of corrections.

On the contrary, complete drawings or designs can be made almost wholly by using "ARTGUM". The design at the left, for example, was done in this way . . . FIRST, paper was covered with graphite, rubbed smooth with a paper stump . . . Next, the pattern was erased by means of an ordinary erasing shield and "ARTGUM" . . . The sketch at the right was done in much the same way, though detail was later added with the pencil. Endless eraser effects are possible with "ARTGUM".

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The MERIT-METER proves
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gives you at least
35% MORE
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☆ **The MERIT-METER**
Sworn facts taken largely from 1940 edition of Sweet's Architectural Catalog File. A point-by-point comparison of steel window quality features. *Very* enlightening.

☆ **The VISUAL-TEST**
A handy kit that compares the gauge of metal used in MESKER weathering bars with ordinary steel sash.

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SEE the difference
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KNOW the difference

Thousands of MESKER Steel Windows installed all over the continent . . in good condition even after years of service . . are the best proof of quality workmanship and materials. But the MESKER "Merit Meter" and "Visual Test" explain the reasons why . . . simply, truthfully, understandably. Mail the coupon today . . . we'll send you both . . . *free!*

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Address _____ (GIVE STREET ADDRESS OR P. O. BOX NO.)
City _____ State _____
5-41-41

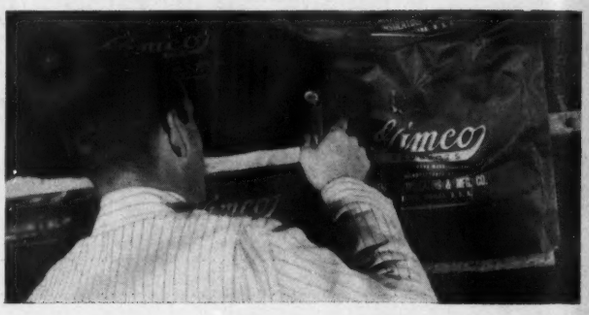
(*Continued from page 82*)

signed by a firm of New York architects, the Expandor units are installed on the inside of a closet or other door, provide about fifteen cubic feet of storage capacity in about two and one-half square feet of floor space.

Standard units for various purposes include two wardrobe models, linen closet, bureau (which will convert a closet into a private dressing room), kitchen cabinet, and bar. Units are sturdily constructed, can be installed easily, quickly in existing homes, apartments, hotels, hospitals, etc., where space is at a premium. Expandor units come in natural wood to be finished to the owner's preference. From Expandor Inc., 221 W. 57th St., New York.

PACKAGED INSULATION

A blanket type of rock wool insulation, completely encased in paper, with wide flanges extending lengthwise for convenient attachment to studs and

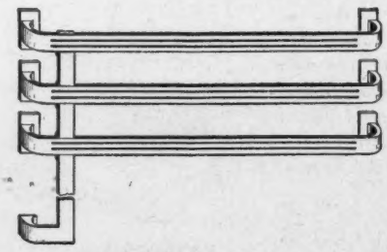


joists, is being produced by General Insulating & Mfg. Co., Alexandria, Ind. Marketed as Gimco Sealal Blankets, one side of it is covered with a heavy vapor proof paper, while the other side is a crepe type paper.

Blankets come in standard widths and thicknesses. The 1-inch thick material is 15 inches wide, 72 feet long; the 2-inch material is 15 inches wide, 36 feet long; the 3-inch material is 15 by 24 inches. The blankets are easy to handle and cut, making for speed and efficiency of application.

ENTRANCE HARDWARE

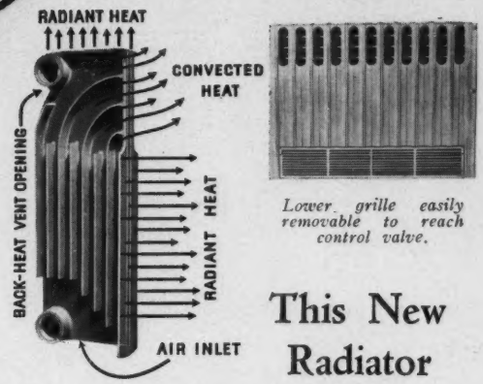
A complete line of entrance trim for use on all types of commercial jobs has been introduced by P. & F. Corbin, New Britain, Conn. Included in the new line of push bars and door pulls, thresholds, and armored front locks is this door pull, made up of three bars with a drop bar. It may be had in any length, to order. The drop bar is 20 inches. Connected by through bolts, it comes in the right hand model as shown. Finishes include brass, bronze, Nickeline, and aluminum.



NEW BLACK STONE

A new stone to take the place of black marble and black granite formerly imported from Belgium and Sweden has been announced by General Ceramics Co., Keasbey, N. J. The stone, known as

(*Continued on page 86*)



Lower grille easily removable to reach control valve.

This New Radiator Gives A Blended Heat

The construction of this New Burnham Radiant Radiator is such that it hastens the mixing or blending of the convected and radiant heat.
The radiant travels the same as light in straight lines, at the rate of 186,000 miles a second.
The convected, due to the chimney arrangement, of the between section fins, hastens its travel, and because of the angle it is thrown into room, speeds up its circulation and ultimate heating.
The two heats blend, giving quicker results.
Send for printed matter. See for yourself.

BURNHAM BOILER CORPORATION
Irvington, N. Y. Dept. K
Zanesville, Ohio Dept. K

Burnham Boiler

Would you specify solid gold or equal? Some specifications for sash cord read "Samson Spot Cord or equal." That form of specification is dangerous — it leaves the way open for inferior substitution. The difference in first cost for a whole house, between Spot Cord and ordinary sash cord, is usually less than the labor cost of replacing a single broken cord.

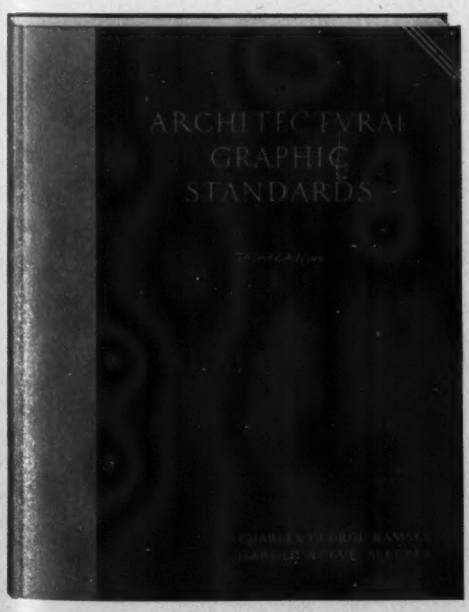
Samson Spot Sash Cord is identified by the Colored Spots (Reg. U. S. Pat. Off.)

SAMSON CORDAGE WORKS
BOSTON, MASS.

REG. U.S. PAT. OFF.

SAMSON SPOT SASH CORD

Here it is, in revised form——the "must" book for ARCHITECTS . . . for BUILDERS . . . for DRAFTSMEN . . . for ENGINEERS



RAMSEY and SLEEPER'S "ARCHITECTURAL GRAPHIC STANDARDS," now thoroughly revised, is of greater use and value than ever before. Information in graphic form which it would take years to assemble from blueprints, pamphlets, magazine sheets and personal notes is accurately presented here in its proper order, in compact space, indexed and cross-indexed for easy reference. The third edition contains 315 plates and 25 pages of index including over 5000 items, counting cross-references. All but 4 plates have been revised, and 73 plates are entirely new. The new book is some 24% larger than the previous edition, and 48% larger than the first edition, yet the price remains the same ($6.00). For those interested in landscape work, a series of three sheets of tree and shrub silhouettes showing species, sizes, and spacing, including all the most commonly used types, is presented comparatively, in a manner not previously attempted. Park equipment is also presented. Other new subjects covered include: Brick Cavity Walls, Serpentine Walls, Walls According to the New York Building Code, Glass Blocks, Termite Control, Skylights, Safety Treads and Nosings, Metal Railing and Post Attachments, Structural Glass, and Sound Insulation.

3d Edition (July 1941)

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The Octagon, 1741 New York Avenue
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They make for good will between the Architect, the Owner, and the Contractor.

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Charleston, S. C. (Vol. I—Octagon Library of Early American Architecture)	20.00
Bertram Grosvenor Goodhue—Architect and Master of Many Arts	30.00

Transportation prepaid on orders amounting to $1.00 or more net. Orders, communications and remittances (checks, money-orders, cash or stamps) should be sent to The American Institute of Architects, The Octagon, 1741 N. Y. Ave., N. W., Washington, D. C.

(Continued from page 84)

Cerastone, is a natural stone, processed under controlled conditions of high temperature and pressure to make it water repellent and proof against chemical corrosion. The firm claims Cerastone is mechanically stronger than the natural stone.

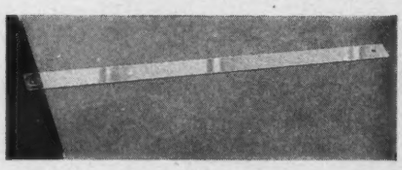
The patented treatment imparts a dull black color to the stone. No parging is necessary since the absorption is zero. The firm recommends Cerastone for base courses and all architectural exteriors, interiors.

Physical properties: weight per cubic foot, 150 pounds; water absorption, nil; modulus of rupture, 2800 pounds per square inch; ultimate crushing strength, 12,000 pounds per square inch; coefficient of expansion per degree Fahrenheit, 7.8 x 10^{-6}.

Samples are available on request.

PLASTIC T-SQUARE

The recently-developed Escolite T-Square, made by Engineering Sales Co., Sheboygan, Wisc., is adaptable where it is desirable to view the entire drawing without moving the T-square. The head is made of black Bakelite composition, while the blade, .09" thick, is of a crystal-clear transparent plastic that is said not to discolor or turn brittle. Neither the head nor the blade will warp, chip, crack, bow, or split, it is claimed. Eight cone-shaped pins are set into the head, engage into corresponding openings in the blade to eliminate wobble, provide for instant removal of blade for use as a straightedge. Escolite T-squares come in 12, 18, 24, 30, 36, 42, and 48 inch lengths.

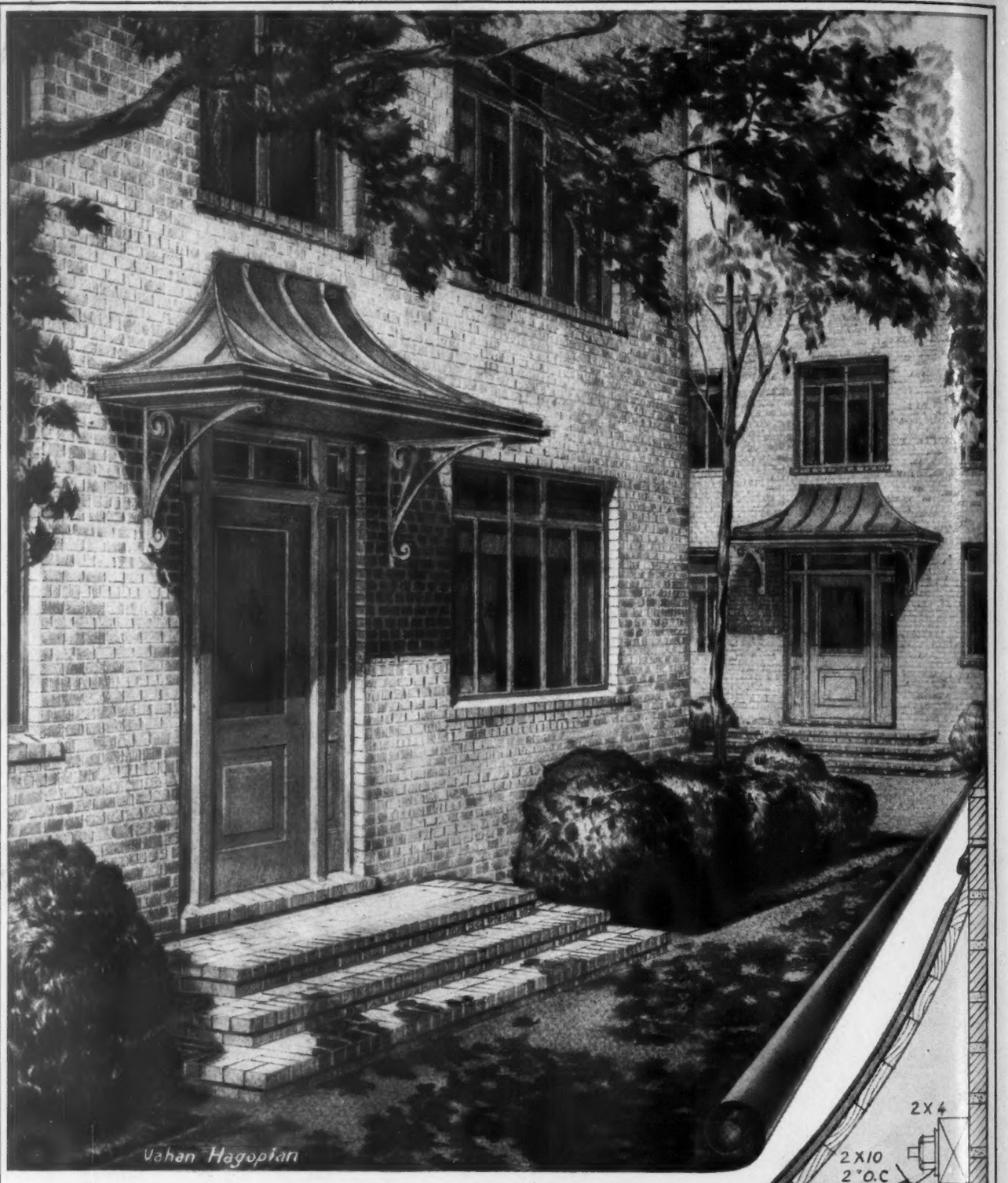


NEW HARDNESS TESTER

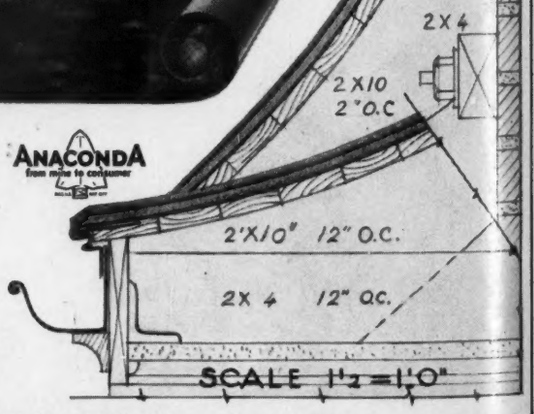
The Barber-Colman Co., Rockford, Ill., announces the introduction of the Impressor, an accurate hardness tester for aluminum alloys or similar soft metals, plastics, hard rubber, and the like. It will permit testing the hardness of finished parts of almost any size or shape. It is small, light weight, and can be carried in the pocket ready for instant use. A slight pressure against the surface to be tested gives an instantaneous, direct reading on the plainly visible dial.

No experience in the use of the instrument is necessary, and its accuracy is not affected by the operator. The Impressor may be used in any position, vertically, horizontally, or even inverted, thus making it possible to check the hardness of vital points after parts have been fabricated in finished assemblies. The Impressor, it is stated, will prevent costly and dangerous errors by detecting the accidental use of materials which are identical except for hardness.

PENCIL POINTS



TYPIFYING the manner standing seam sheet copper roofing may be used over multiple dwelling entrances to impart warmth and color . . . and to accentuate the structure's individuality.



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PENCIL POINTS, published monthly by Reinhold Publishing Corporation at East Stroudsburg, Pa. Publication office, East Stroudsburg, Pa. Editorial and Advertising Offices, 330 West 42nd Street, New York, N. Y. Yearly subscription $3.00, single copies 50 cents. Entered as second class matter, July 8, 1941, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879. Volume XXII, No. 10, Dated October, 1941.

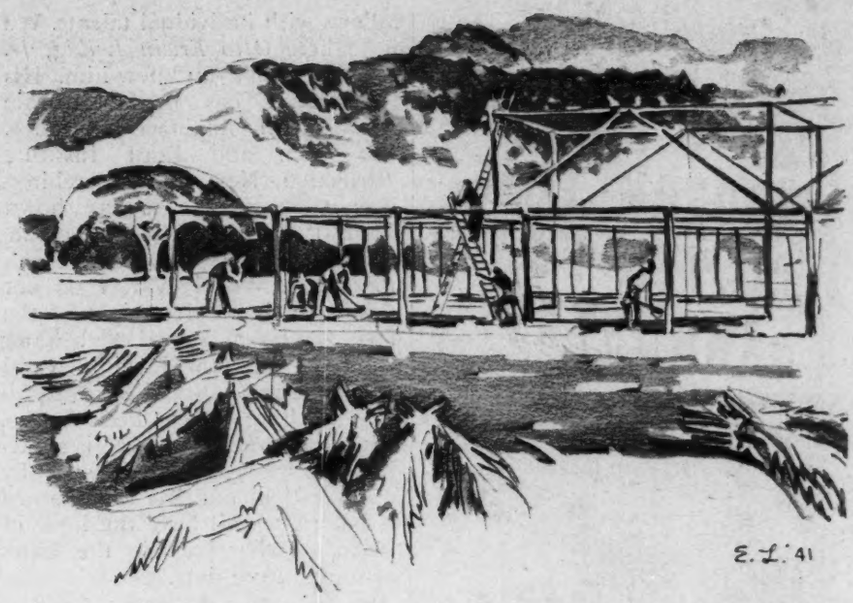
THRESHING FLOOR

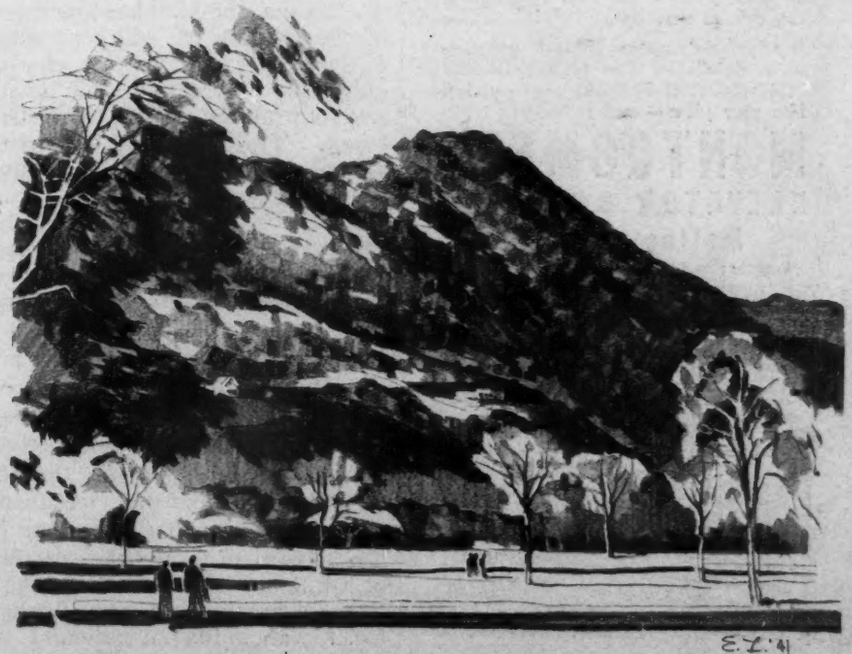
From Port of Spain, Trinidad, B.W.I., comes this interesting letter from JOSEPH L. HAUTMAN, *New York Architect, in charge of the architectural work on the Trinidad defense project for Caribbean Architect-Engineer. Hautman praises the work there of an up-and-coming delineator,* OTTO ERWIN LEIBIG, JR., *three of whose pencil studies are shown at the right.*

Designing and building U. S. Army air bases in the Caribbean district is quite different from World's Fair, U.S.H.A., or what have you. I must say that there is no end of interest to the work going on here. Starting from scratch in virgin jungle territory, cutting through to obtain topography, and then establishing principles of design for the best means and manner in which to live in the tropics--all adds to the zest and pleasure of working on a project this size. To do justice to a detailed description would require writing for months and fill volumes. I will leave that for some future date. Probably *Ralph Walker* has been giving first-hand information on the subject anyway, and I can in no way compete with his ability to describe "commuting to Cumuto."

Living here is something that really is worth while aside from the many pests such as ants, mosquitoes, bugs, snakes, ticks, tarantulas, and so forth. The place is just like perpetual spring. Even the rainy season is full of interest. Frankly, I don't see why the plutocracy of the United States missed this place especially during January, February, and March. I am sure that when it is found out, Bermuda, Nassau, and the islands farther north are going to lose their popularity.

Even though this is a field office, we have found time to encourage





Three of OTTO ERWIN LEIBIG'S *pencil studies are reproduced here at half their actual size. The sketches, from top to bottom: "Native Construction," "Santa Cruz Road," and "Savannah — Queens Park"*

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fellows with individual talents. We have here *Otto Erwin Leibig, Jr.* I do not think you know him. His background has been Carnegie Tech, Civil Engineering course, one year, and Pratt Institute (Brooklyn, New York), Architecture, three years. He has shown marked ability with the use of the pencil and the brush. Even though there is a World War, I do not think we should lose sight of the fact that good pencil and water color delineators will be in demand when the war is over, just as much as they have always been before. Although everything here is so delightful, which makes time slip by quicker than one has ever known it before, we all have the hope of being together back in the States at some future date.

A. F. M. LANGE, *a retired Architect of Brooklyn, N. Y., comments on Lorimer Rich's criticism of the Smithsonian Gallery of Art.*

In the August number of PENCIL POINTS, *Lorimer Rich* has ably pointed out sufficient shortcomings in the accepted design for the Smithsonian Gallery of Art to bar its erection on the architecturally and otherwise beautiful Mall in Washington. But he ends his devastating critique, perhaps in a spirit of resignation (because nothing can prevent this fulfilment of the evident desire of a powerful clique of architectural anarchists to jar the feelings of the lovers of the architectural beauty of the Mall by deliberately funking all architecture in the sacred cause of functionalism in this outstanding building) by offering as consolation the fact that the Mall has four rows of elm trees, which will gradually, at the height of eighty feet, charitably hide this catastrophic monstrosity from the view of the pedestrians. The foliage of elm trees lasts about five months; during the remaining seven months of the year the citizens and visitors of Washington can, of course, avoid the Mall or wear blinkers when they pass the Smithsonian Gallery of Art.

The satanic ambition of the architectural strip-tease designers of the moment to control the client market if for only a short period *(après moi le dèluge)* with the denuding idea does not let them think so far as to realize that if this design represents the exterior of a museum of art, how can they denude architecture any further for, f.i., an industrial museum?

War shortages will produce changes in architectural design, points out ALBERT CHAS. SCHWEIZER, *Director of the Terminal Program of New York University School of Architecture, who was quoted recently in an interview published in the* NEW YORK WORLD TELEGRAM.

Wars still affect architecture, though not as they did in the Middle Ages, when every fellow's house was a fortress.

In the last war the airplane was developed, and airplane design was carried over into everything—automobiles, houses, furnishings, and gadgets. It made possible the universal "streamlining" we have heard so much about, and the modern styles in architecture and furniture. In this war the shortages of material are bound to control architecture; to force the architect to design and the public to accept entirely new methods and materials. The degree and speed of change will depend on the duration and intensity of the emergency.

In many defense centers they are putting up houses that are not only fabricated before erection but which can be taken apart and moved somewhere else. Many necessary things will go. Cellars, for instance, are expensive and in many cases you can do without them and use a heating plant on the first floor. Gadgets will be omitted. Better planning, with less waste, will become a necessity. In many cases houses will be made smaller as an economy measure.

Plastics are good, but expensive, and raw material for them may become scarce. Wood is probably the coming material, some in its natural state and much of it plywood and plastic wood, which can be made from cheap fiber and is highly adaptable. But while we'll use wood for many things we used it for twenty years ago, it will be in a different form and new design will make it acceptable.

SPEAKING OF DEFENSE

"There can be no completely coordinated determination of the ways and means of conserving the use of materials essential to defense production other than the application of Governmental control and a system of rationing, but it is incumbent on those interested in the continuance of private construction during the duration of the emergency to give all possible aid in conserving materials essential to defense construction."

Producers Council Bulletin

Dan Griffin Speaks for Steel...

★ Below are quoted the remarks of Dan F. Griffin, a steel worker in the Campbell Works of The Youngstown Sheet and Tube Company, made recently at a meeting of a Youngstown, Ohio, civic club. Reflecting the attitude of Youngstown employees, his words should be of interest to the users of Youngstown steel.

"Today, the eyes of the world are turned upon the ever-increasing conflagration in Europe. We realize that our nation has undertaken the gigantic task of transforming a peace-time nation into a nation geared to total national defense.

"The steel mill employee is playing an ever-increasing and more important role in this task; and the American steel man is tops in the industry.

"We know that as much depends upon the skill and devotion of these steel mill employees as on our armed forces on land, sea, and in the air. To a man, the steel mill employees of America appreciate they are among the highest paid workers in the world. Their working conditions are the best.

"The American steel worker has plenty of leisure time to do as he will. He can work in his garden; he can seek any form of entertainment, not only for himself but also for his family. He can study to improve himself, and quite frequently does. He is in no way limited.

"The highest office in our land has been occupied by men of the most humble birth. Freedom in America has never had a price, but its rewards are unlimited. Your steel mill employee knows that he cannot buy freedom—he must think freedom—he must work for freedom.

"We treasure our American way of life as we have it today. We're prepared to go to any lengths to preserve for ourselves and for our children that tranquility, that comfort, that peace, which we have enjoyed in years past.

"We're willing to pay our share in money or labor—yes, we are already lending. We want our boys to serve—they're already being trained for service.

"Our steel workers' creed should be an all-out effort to procure peace for ourselves and for the rest of the world. If we must work harder or longer to produce the steel necessary to insure that peace, then we're ready and anxious to do our bit, for in that way only do we serve.

"The Army needs steel—we'll make it.

"The Navy needs steel—we'll make it.

"The Air Force needs steel—we'll make it.

"The whole world needs steel, and steel workers will make it, for the real steel man is a true American. He will never do or think anything to jeopardize America. He will do everything in his power to preserve America for Americans and Americanism.

"We'll remember, always, that the men of the Army, the men of the Navy, the men of the Air Force, those defending democracy and the men of production are all ONE.

"We're 'Sammies' on guard!

"The U.S. in United States means US."

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Yet there is certain to come a day when ARMCO Stainless again will be plentiful. You will have many future opportunities to apply it to the architectural uses it has now, as well as to others *yet to be developed.*

Meanwhile, you'll want to keep posted on ARMCO Stainless developments. Whenever questions come up about grades and their applications for special work you may be projecting, be sure to write for the latest information. We'll be glad to assist in every way we can. The American Rolling Mill Co., 2811 Curtis St., Middletown, Ohio.

ARMCO STAINLESS STEELS

COMPETITIONS

AMERICAN ACADEMY

Because of present conditions in Europe, the American Academy in Rome has announced that it cannot send its Fellows to Rome for study and travel, and therefore no fellowships will be awarded next spring. However, in order to carry on the policy of aiding and stimulating American art, the trustees have decided to offer competitive and purely cash prizes in Architecture, Landscape Architecture, Musical Composition, Painting, and Sculpture totaling over $7,000. First prize in each field will be $1,000; second, third, and fourth prizes will be $100, $50, and $25 respectively. In addition, a prize of $25 will be awarded to each of the preliminary competitors who is chosen by the jury to enter the final competition.

Applications must be filed by January 1st in painting and sculpture; in the other three subjects by February 1st.

Information and entry blanks may be had on request from *Roscoe Guernsey,* Executive Secretary, American Academy in Rome, 101 Park Ave., New York.

GIRL WINS COOPER UNION PRIZE

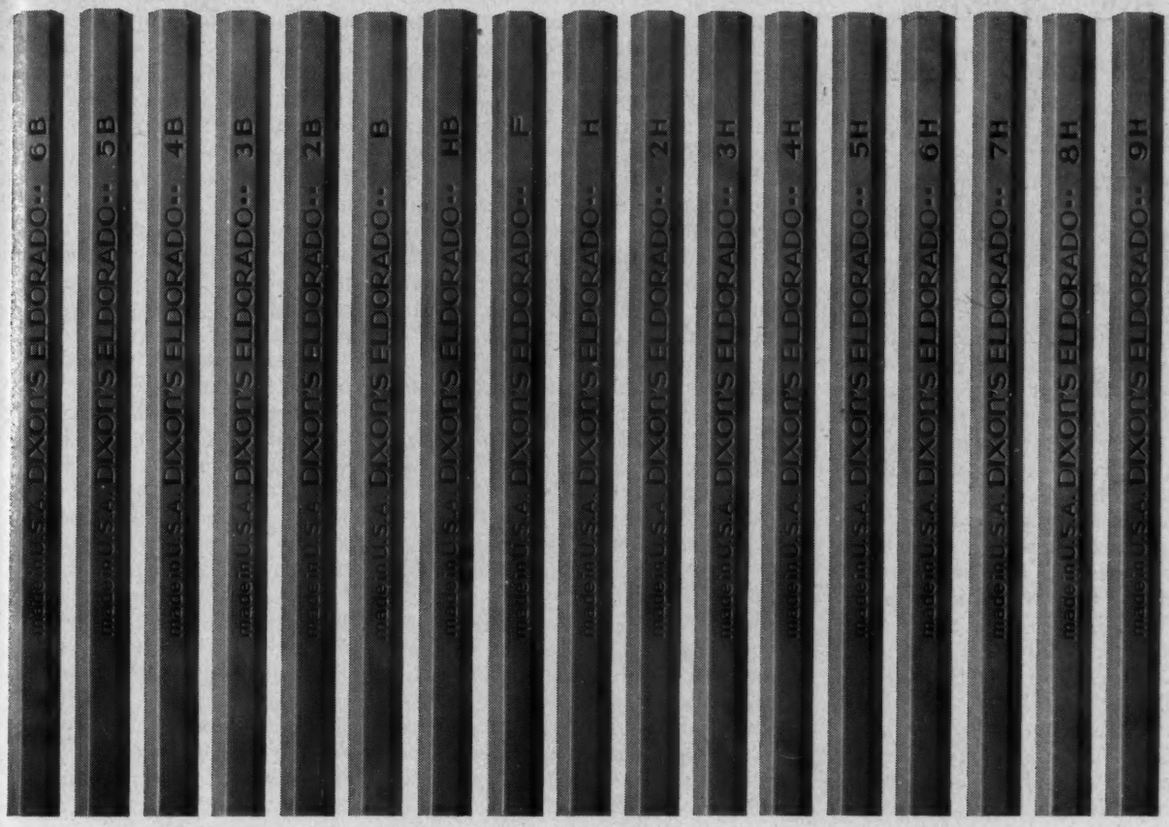
A $1,000 scholarship for post-graduate work in Architecture and Civic Design has been awarded to *Miss Ann Sirotenko,* of West Orange, N. J., by the Advisory Council of the Cooper Union Art Schools, New York. Miss Sirotenko received the award in recognition of the excellence of her designs for large buildings, modern interior decoration, plumbing and sewage systems, and heating and ventilating units.

BRIDGE DESIGN

The American Institute of Steel Construction has announced its annual bridge design competition, open to bona fide registered students of structural engineering and architecture in recognized technical schools of the United States and its possessions. Cash prizes of $200, $150, and $50 are offered for designs placed first, second, and third respectively. Certificates, signed by the Jury of Award and officers of the Institute, will be awarded to the prize winners and to those who are given honorable mention.

The competition will close on February 10. Details may be had from the office of the Institute at 101 Park Ave., New York.

TYPHONITE ELDORADO PENCILS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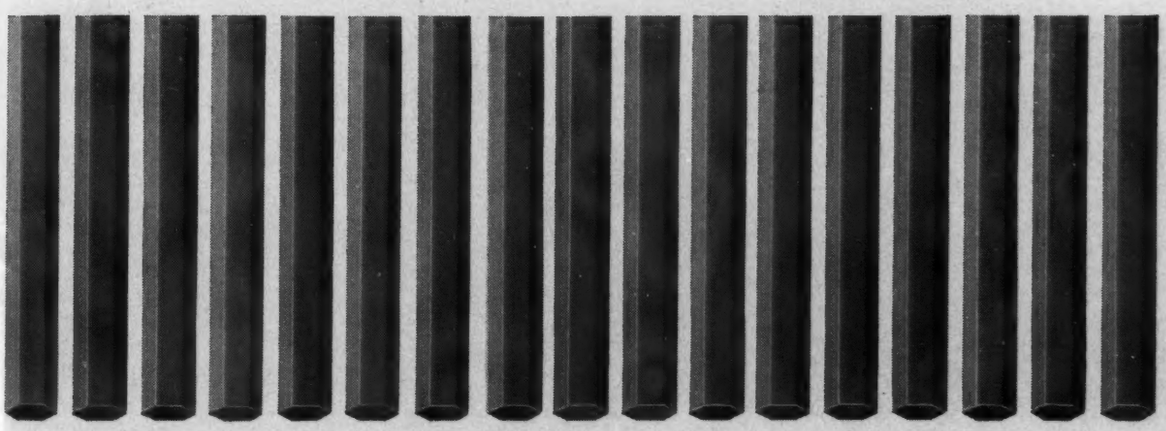
17 DEGREES, *like 17 parallel lines . . .*



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HERE, THERE, THIS AND THAT

BOSTON NOTES

"Where are you working this week?" is the most familiar sound to this era's ears, when they are attached to draftsmen. The answer is likely to be such as *Stone & Webster, Charles T. Main, Fay, Spofford & Thorndike,* etc.—engineers all. Architects have work in spots, though the picture is hardly maculated, and that Damoclean sword of priorities makes them justifiably unhappy. Eventually all buildings for the civil population may have to be made of rammed earth or put off until later, so the draftsman had better check on defense tie-ups at his proposed place of labor. This, the day of the engineer, finds *them* with nothing but; therefore the rush thitherwards!

Among the boys there was the secret hope of a labor shortage, the better for a non-union craft to come into higher wages despite itself. And there is a shortage, but it isn't short enough to offset the shoals of reconditioned draftsmen from all quarters and trades who are taking a flier on defense work. In this town you sometimes get the slightly exaggerated impression that you are acquainted with lads in about all the better-known large and small offices, many of them belonging to one or more of our organizations. Men of this Boston Group now report more completely strange faces among the engineers' architectural crews than you could shake a stick at. Hence the pyramids and average hourly wages which take little account of short hauls and no vacations, sometimes no nolidays; take more account of pay-checks swollen with psychological effect from occasional spells of overtime.

Local wanderers are many, and two who come to mind, *Rea Esgar* and *Silvio Zanetti,* have entered upon new works in pastoral Mississippi. *Lloyd Hendrick* is now architect at Camp Edwards, and *Lawrence Howard* shepherds a group of our youth at the Army Base, asylum for numerous architects and their helpers.

Probably the most notable item since *Henry Murphy* told the writer either to buy an ear trumpet or a dictionary of brogue is that after eighteen years in one office *Phil Levi* saw a great light and pulled up stakes. Day of the faithful retainer is by no means over, but redefinition has shortened the tenure necessary for winning an F.R. with lead-covered palms, from five years to three months. Short of a proprietorship you're getting old or need fresh spark-plugging if you can't find a new and better solution for your private struggle for existence "every so often."

Relaxed groups spoked about a beer keg sometimes consider such battle excerpts as the foregoing and ask, "What does it git ya?" Extra small change but no tinsel, and when the money's gone in a few weeks (a month or two for the Boston Archiscots) your recollection of its garnering is not graced by any of the flourishes that color life in old line offices which have a touch of the private club about them. If some bird hadn't tried to prove to the hired hands that the financial abnegations frequently associated with tinseled offices were an inherent part of one's "professionalism," instead of explaining that it was just Nature's price for a

(Continued on page 62)

On exhibit at the Museum of Modern Art, New York, during September, was the circulating exhibition, "The Wooden House in America." It traces, through historical and explanatory material, the changes in wood construction and design as affected by the development of building tools, by the country's growing prosperity, and by imported styles. Pictured were the hand-hewn log house, the heavy construction of New England Colonial homes, the refinements of the Georgian era, the development of the light stud frame, and modern experiments in construction. The house shown here was designed in 1937 by John B. Yeon (with A. E. Doyle & Associates, Architects), Portland, Oregon, for Aubrey Watzek. Other architects represented were Gregory Ain, Frank Lloyd Wright, Walter Gropius, Marcel Breuer, Harwell Hamilton Harris, John Funk, Carl Koch, and George Howe

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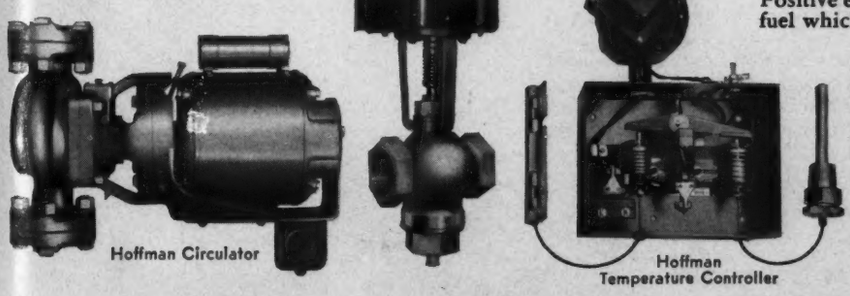

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Publications mentioned here are all 8½ x 11 unless otherwise noted, and will be sent free, except as indicated, upon request to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

FLUORESCENT EQUIPMENT—A profusely-illustrated, 24-page brochure on Linolite fluorescent equipment, has been issued by The Frink Corp., and its subsidiaries, Long Island City, N. Y. Conventionally sectionalized, the book presents a complete range of standard and custom-built fluorescent fixtures. Architects and engineers will welcome the engineering and design data which are included with the graphic charts and views of typical installations.

MATERIALS HANDLING EQUIPMENT—Described in a new 20-page booklet, B-2264, from Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., are electric motors and controls for cranes, hoists, and gantry bridges for use in central stations, construction projects, and industrial plants. Features of AC and DC motors up to 600 horsepower for typical materials handling operations are discussed, with a note on gear motor applications. Methods of motor braking are described and illustrated. A two-page application chart facilitates the selection of motors and control for typical materials handling operations.

PLUMBING SUPPLIES – Catalog D, from Northern Indiana Brass Co., Elkhart, Ind., contains 108 pages, and more than 625 illustrations, listing every type and size of fittings for every conceivable need in plumbing, heating, air conditioning. The complete listing numbers more than 9,000 sizes and types of bronze valves, copper fittings, and plumber's supplies.

HY-V AIR JET—In its Bulletin No. 641, DeBothezat Ventilating Equipment Division, East Moline, Ill., presents a column-mounted man cooler adjustable to blow in any direction. Performance data charts, and engineering drawings are contained in an 8-page bulletin, punched for insertion in a three-ring binder.

LUMBER SPECIALTIES – A.I.A. File No. 19-A-I. A 12-page book from Weyerhaeuser Sales Co., First National Bank Bldg., St. Paul, Minn., lists the lumber specialty products of this firm.

Also from this firm: "The 4-Square Catalog of Lumber Products," and "The High Cost of Cheap Construction." This latter book contains engineering data for correct house building.

STEEL JOIST CONSTRUCTION—A six-page folder from the Steel Joist Institute, 201 N. Wells St., Chicago, Ill., illustrates and describes the application of steel joist construction to multiple dwelling units in the New York metropolitan area.

Also available from the Institute is a 36-page handbook, "Steel Joist Construction," which includes dimensions and properties of steel joists, standard specifications, loading tables, etc.

ASPHALTIC SURFACING—A copy of the second, and final, progress report on the performance, after three years of heavy traffic service, of a thin asphaltic surfacing for steel battledeck floors for highway bridges has been issued by American Institute of Steel Construction, Inc., 101 Park Ave., New York. The 14-page report discusses the maintenance of the surfacing, has progress photographs, makes general comments on the condition of the roadway surfacing.

UNIT HEATERS AND AIR CONDITIONING UNIT—Fedders Mfg. Co. Inc., 11 Tonawanda St., Buffalo, N. Y., has available two catalogs. One on its Series 4 unit heaters (A.I.A. File No. 30-D-11) gives specifications and capacity data on heaters for commercial and industrial installations. The other, on all-season air conditioning units (A.I.A. File No. 30-F-2) presents the firm's unit in capacities from 1 to 25 tons. Units are available for air conditioning or for summer comfort cooling.

(Continued on page 54)

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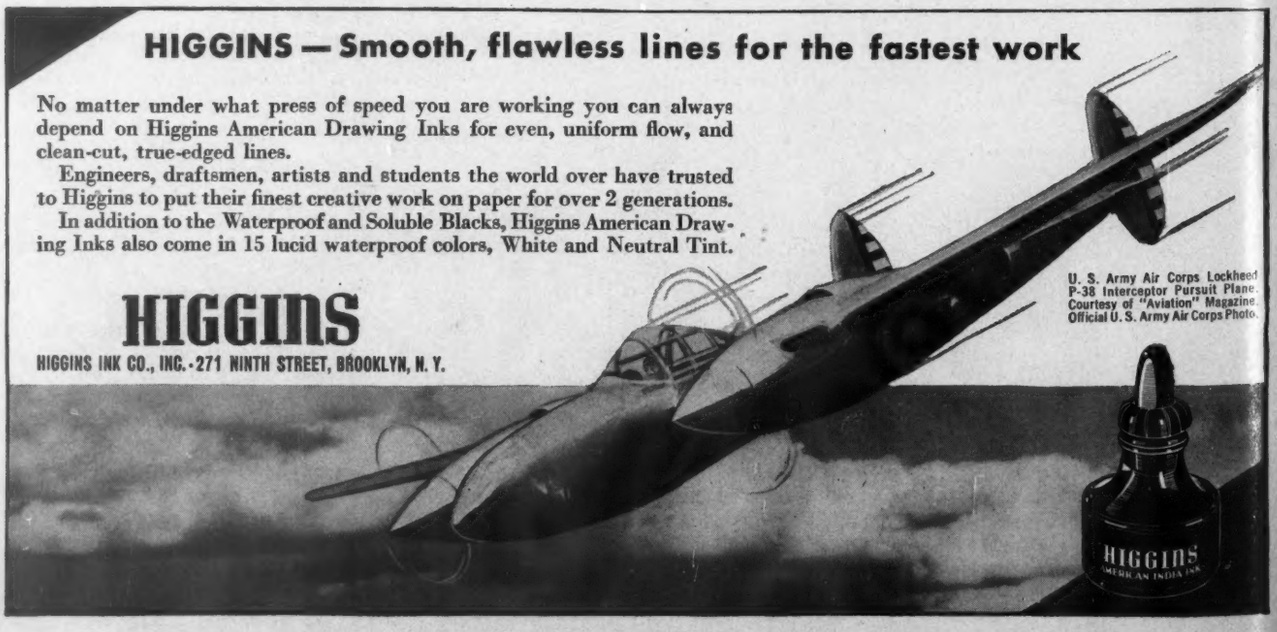


U. S. Army Air Corps Lockheed P-38 Interceptor Pursuit Plane. Courtesy of "Aviation" Magazine. Official U. S. Army Air Corps Photo.

A handsome, long-lived floor of Nairn Linoleum in a ward of St. Agnes Hospital, White Plains, New York.

The new trend in the hospital field—more modernization less new construction

● Realizing the growing scarcity of many building materials for new construction, hospital authorities feel that now is the time to concentrate on the renovation of existing buildings. A frequent disadvantage of older buildings is their worn wood floors. In Nairn Linoleum architects find a floor specification that fulfills *every* modern hospital requirement.

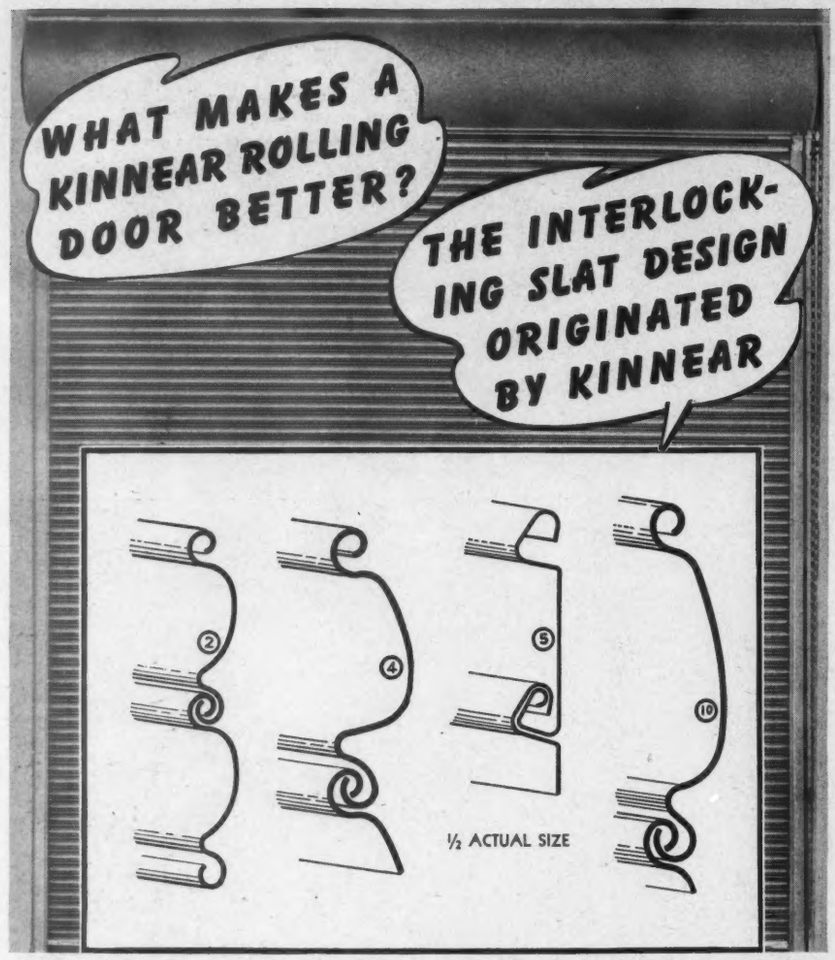
For one thing, Nairn Linoleum reduces foot-traffic noises to a minimum, providing the quiet so necessary for patients. And its resiliency makes it easy on the feet. (Lessens foot-fatigue of the staff and increases efficiency.) Nairn Linoleum more than gives the sanitary features that hospitals require. Authorities find its proven germicidal property (unobtainable in other types of flooring) a valuable asset. And its smooth surface has no cracks to collect dirt and germs . . . Keeps spick and span with a minimum of cleaning and waxing.

From an economy standpoint too Nairn Linoleum is ideal. Moderate in first cost, negligible in upkeep expense, this modern linoleum "takes" years of long hard foot-traffic with hardly a sign of wear. For wards, rooms, offices and corridors alike. Nairn Linoleum gives hospitals a permanent, trouble-free specification. When installed by Authorized Contractors, Nairn Linoleum is fully guaranteed.

CONGOLEUM-NAIRN INC., KEARNY, N. J.

NAIRN

Linoleum Floors and Walls



A revolutionary advance in door efficiency was ushered in when Kinnear originated the interlocking steel slat, **nearly half a century ago!** (Before that time, the only rolling door was made of an ordinary corrugated sheet coiled on a pipe.) And today the same basic slat design, improved and modified somewhat, still sets the pace in door convenience, durability, economy **and appearance.**

Here are some of the reasons why this interlocking-steel-slat construction has won such wide preference for Kinnear Rolling Doors . . .

Sheds Water: **In the position illustrated above, the sections shed water on the convex side; when reversed top for bottom, they shed water on the concave side.**

Reversible: **Since the curtain coils in either direction with equal ease, it can be reversed top for bottom (and inside for out, if water-shedding is required).***

Resists Both Horizontal and Vertical Forces: **Distribution of metal on opposite sides of the vertical axis is nearly equal, giving equal resistance to horizontal impact or pressure from either side.**

Resilience That Absorbs Punishment: **Under horizontal pressure, the slats spring open or flatten momentarily, giving the door extra ruggedness and durability.**

Free-Acting Joints: **Easy articulation at all joints permits quick, smooth, compact coiling at all times.**

Compressibility: **A small clearance between slats at the joints permits a slight, vertical telescoping of the curtain, which has a cushioning effect when the door is closed. It also permits the bottom bar to adjust itself to any slight slope in the sill between jambs.**

Attractive Appearance: **Curves in the slats form evenly-spaced horizontal highlights and shadows on the curtain, giving the door an unusually neat and attractive appearance.**

**** Note: Exception in slat No. 5, used when flush, even door surface is desired. Curtain formed of No. 5 slats coils freely in one direction, locks vertically in direction opposite coil.***

Every one of these features contributes to client satisfaction when you specify Kinnear Rolling Doors. And there are numerous other reasons why you'll want to recommend these **rugged, protective, all-steel doors that open straight upward and coil quickly and compactly out of the way above the opening.** Write for details today, or see Sweet's.

THE KINNEAR MFG. COMPANY, 1900-20 Fields Ave., Columbus, O.

SAVING WAYS IN DOORWAYS **KINNEAR ROLLING DOORS**

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 52)

REGISTERS, GRILLES, AND ACCESSORIES—A.I.A. File No. 30-J. A set of seven selection charts showing grille size, static pressure, air throw, drop, and approximate floor area of conditioned space is a feature of the 56-page catalog from United States Register Co., Battle Creek, Mich., showing air-conditioning registers and grilles. New lines of louver-type, adjustable bar, and fin-type directional-flow registers are also shown.

GYPSUM SHEATHING – A.I.A. File No. 19-D-33. Complete information on Gypsum sheathing, including its fire resistance, strength, durability, weather and water resistance, non-shrinking, is contained in this 20-page catalog from the Gypsum Association, 211 W. Wacker Drive, Chicago. Several pages show the sheathing in use on housing projects and army barracks.

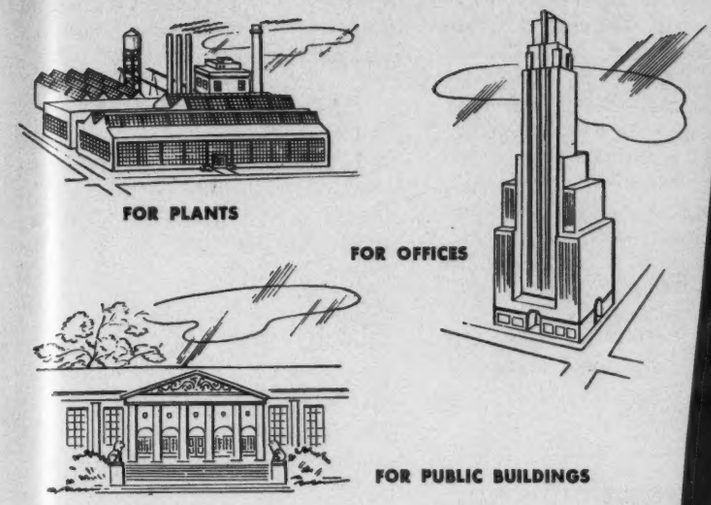
COPPER-FABRIC FLASHING – A.I.A. File No. 12-H. A four-page folder from Wasco Flashing Co., Cambridge, Mass., gives specifications and cross-section drawings on its flashing for spandrel and thru-wall use.

Also from this firm: Folder, A.I.A. File No. 29-H-3, four pages, on its copper-fabric coated shower pan, together with specifications and construction details.

ACOUSTICAL TILE—A custom made tile to fit special conditions is announced by Industrials, Inc., 1530 Chestnut St., Philadelphia, Pa. Known as Softone Acoustical Tile, it comes in travertine finish in standard colors of white, ivory, buff, with special colors available. The four-page folder gives sound absorption coefficients.

BOILER RATINGS—The Institute of Boiler & Radiator Mfrs., 60 E. 42nd St., New York, has a revised edition, dated March, 1941, of "I-B-R Ratings for Cast Iron Boilers" listing all boilers for which IBR ratings have been approved up to 30-inch grate width. Testing and rating code for low pressure heating boilers has been adopted as the standard method for determining the output of cast iron heating boilers. It is 5¼ x 8¼ inches in size, sells for 15 cents.

(Continued on page 56)



You can plan more efficient, more comfortable washrooms with these NEW DATA SHEETS

COMFORTABLE, sanitary washrooms play an important part in your clients' industrial and public relations programs. It's your responsibility to include in your plans every feature necessary for comfort and convenience. And that's where these new Scott "Data Sheets" will prove decidedly helpful.

You'll find valuable facts on how to solve problems of traffic flow, fixture location and sanitary requirements. Used with the Scott Washroom Advisory Service, they'll help you make any client's good-will program more successful . . . by planning washrooms that pass every test of cleanliness and comfort. For your set of these new "Data Sheets," just mail the coupon.

• • •

The amazing new "Soft-Tuff" ScotTissue Towels have 10 times more rub strength than the old-type ScotTissue Towels. They go farther, cut costs. Yet they are soft as ever.

Scott Paper Company
Dept. PP-10, Chester, Pa.

Let me have, without obligation, my set of the new Don Graf Pencil Points Data Sheets on washroom planning.

*Name*_____

*Organization*_____

*Address*_____

*City*_____ *State*_____

Copr., 1941, Scott Paper Co., Chester, Pa. Trade Marks "ScotTissue," "Soft-Tuff" Reg. U. S. Pat. Office. Trade Mark "Washroom Advisory Service" Registration applied for.

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 54)

NEW IDEAS IN FUNCTIONAL FLOOR DESIGN—A.I.A. File No. 14-P-21. A 12-page handbook for architects and engineers on the uses and properties of open steel grating for floor, stair tread, walkway, ventilator, sidewalk grating, and platform construction. Open Steel Flooring Institute, Inc., American Bank Building, Pittsburgh, Pa.

WIRING HANDBOOK—A new handbook from General Electric Co., Appliance and Merchandise Department, Bridgeport, Conn., describes G-E home wiring. Diagrams show eight different ways it can be installed. Recommendations for the number and kinds of circuits are given, together with a guide for writing specifications. Listed also are materials for G-E home wiring.

Also from the same firm: "Adequate Wiring for Industry," a handbook outlining modern factory wiring practices which can be adapted for all factories. Included is a series of handy tables.

NATIONAL DEFENSE Needs 3 out of every 4

Three out of every four rolls of Arkwright Tracing Cloth made today go straight to defense plants. For head draftsmen in key industrial firms know that permanent transparency . . . quality of finish . . . ease of erasure . . . and ability to take sharp, clear lines in tracing cloth are vital to any production speed-up. These tracing cloth advantages are just as important to the profitable operation of your own business! Write for samples of the Arkwright brands—compare them on all points with the tracing cloth you're now using! You'll see why men who know best are now using Arkwright! Arkwright Finishing Co., Providence, R. I.

Arkwright TRACING CLOTHS

WHERE TO USE VALVES—Fundamentals of valve design and applications are contained in a 7½ x 10¾ catalog from Jenkins Bros., 80 White St., New York. The fundamentals section discusses metals used, and drains and by-passes. An informative section is devoted to ASME power boiler code valves. In the booklet also are six blueprint-type pages showing a representative assortment of Jenkins valves.

SENSIBLE VENTILATION—Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago, Ill., presents pictorially in a 40-page catalog the installation in 26 different types of buildings of its line of ventilating equipment.

HEAT DISPOSAL—A 12-page booklet from Carrier Corp., Syracuse, N. Y., outlines the theory, operation, and principal features of the Carrier line of evaporative condensers. It is full of diagrammatic drawings and photographs, explains in detail the methods of heat disposal from both air conditioning and refrigeration, and from liquids and engine jacket water.

WATERPROOFING CEMENTS—How to waterproof and patch concrete walls and floors is described in a four page, 3½ x 6 folder from Smooth-On Mfg. Co., Dept. 355, 570 Communipaw Ave., Jersey City, N. J. The folder shows how seepage can be stopped from the inside of cellars, etc., how cracks and holes can be repaired.

THE PHANTOM DOORMAN—Yale & Towne Mfg. Co., Stamford, Conn., has a four page folder on its PH 7 automatic door opener and closer which works on the electric eye principle. Instead of the electric eye, the door may be operated by switch control, pull cord, push button, or floor treadle.

BLOWER CATALOG—A new 64-page combined catalog and engineering data book on Universal blowers has been announced by Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago. Profusely illustrated, the book includes uses of each type, characteristic curves, dimensions, performance data. Fan performance laws, an altitude table. air friction and duct graphs, sample specifications, and a chart of universal discharge arrangements are also reproduced.

(Continued on page 58)

From Eagle's New "MIRACLE MILL"

comes *Electronic graphite of amazing fineness to make TURQUOISE drawing pencils better than ever!

Over a long period, we have consistently increased the strength, smoothness, durability and blackness of Eagle TURQUOISE leads with every increase in the fineness of the graphite particles which we could attain. We had alluring hopes of further great improvement if we could, by some miracle of attrition, produce graphite of an entirely new order of fineness, say in particles down to 1 micron. (1 micron—approximately 1/25,000th of an inch). By brilliant research we have made our hopes come true.

Pictured here is a new type attrition mill, wholly conceived and constructed by Eagle technicians and for which U. S. Patents have been allowed. Both the method employed and the results obtained are revolutionary.

In this mill, friction is not applied to the graphite by any grinding device whatever. There is no movement except of the graphite itself and the air which actuates the process. Mutual attrition is set up in the graphite because different strata of the confined mass move at different speeds. This attrition releases into the buoyant air stream a continuous smoky haze of graphite particles whose fineness can be closely controlled for a consistently uniform product. A particle size of 1 micron is obtainable.

*"Electronic" graphite makes a more compact lead that holds its point longer . . . a finer textured lead that flows more smoothly . . . a stronger lead that reduces breakage . . . a denser lead whose opaque and even lines make perfect prints. These improvements in Eagle TURQUOISE give you extra speed and economy—at no extra cost.

FOR DRAFTSMEN'S LEAD HOLDERS

You can obtain TURQUOISE grading, smoothness and reproduction quality in the new TURQUOISE DRAWING LEADS . . . five inches long, in one diameter to fit all standard holders. Grades: 2B to 6H.

SEND FOR A FREE SAMPLE

pencil or lead. Specify the grade desired, this publication and the name of your regular supplier.

EAGLE "Chemi-Sealed" (SUPER BONDED) TURQUOISE DRAWING PENCILS

*REG. U. S. PAT. OFF.

EAGLE PENCIL COMPANY • 703 E. 13TH STREET, NEW YORK CITY

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 56)

SQUARE D PANELBOARDS—A.I.A. File No. 31-D-3. Construction details and technical data on the Multi-Breaker type MH distribution panelboard is presented as Section 5200, of Catalog No. 37 by Square D Co., 6060 Riverside St., Detroit, Mich. This four page folder is punched to fit a standard ring binder.

BOILER BOOKLETS—The jacketed "K" or stoker boiler for small homes, and the Streamlined "A" all-fuel boiler for larger capacities are pictured and described in two folders currently available from Spencer Heaters, Williamsport, Pa.

BORO KITCHEN CABINETS—A.I.A. File No. 35-C-12. Catalog and details on kitchen cabinets and linoleum sinktops are presented in a 10-page catalog from Boro Wood Products Co., Maspeth, Long Island.

BATHROOM CABINETS, ACCESSORIES—A.I.A. File No. 29-i-1. Vitreous porcelain and baked enamel-finished bathroom cabinets, accessories, and wall mirrors are illustrated and described in a 20-page catalog from The F. H. Lawson Co., Evans & Whateley Sts., Cincinnati, Ohio.

GRILLES—A.I.A. File No. 30-J. Grilles made of aluminum, bronze, monel, stainless steel, steel, and other commercially-rolled metals are illustrated and described in a spiral-bound catalog, thumb-indexed for quick reference, from Hendrick Mfg. Co., Carbondale, Pa. A useful 193-page, 9 x 12 handbook for architects, engineers, contractors, and building owners.

RED SPOT LIGHTING SPECIALTIES—Catalog No. 41, fifty pages. A greatly-expanded line of both fluorescent and incandescent equipment is shown in this catalog available from The F. W. Wakefield Brass Co., Vermilion, Ohio.

FLUORESCENT TROFFERS—A.I.A. File No. 31-F-2. An eight page folder, punched to fit a ring binder, describes the Day-Brite fluorescent troffers designed for use with acoustical ceilings of Tee-Bar snap-in block construction. Tables show how to figure footcandle intensities for the troffers. Day-Brite Lighting, Inc., St. Louis, Mo.

STEAM HEATING—The Gorton system of vaporizing and equalizing steam heating systems for automatic heating is described in Bulletin No. 111, four pages, available from Gorton Heating Corp., Cranford, N. J.

WORTHINGTON CONDENSERS AND COOLERS—Bulletin C-1100-B13 from Worthington Pump & Machinery Corp., Harrison, N. J. This 12-page bulletin pictures the Worthington-Carbondale shell-type and multi-pass condensers and coolers, gives construction data.

LIGHTNING PROTECTION—Graphically portraying the inside story of lightning protection, West Dodd Lightning Conductor Corp., Goshen, Ind., presents in a plastic bound, 10½ x 12¼ book, the story of semi-concealed and concealed lightning protection equipment for all types of buildings.

(Continued on page 60)

Skylights THAT INSULATE, TOO!

THERMAG BLOCKS SAVE HEATING & COOLING COSTS . . . and provide even distribution of light

The sectional sketch above shows how "Thermag" semi-vacuum blocks with "Magnalite" diffusing design are used in skylights such as the one illustrated.

With this type of skylight (1) white, mellow daylight is diffused in four directions to the entire room; (2) thus the skylight area is kept to a minimum; (3) two-thirds to three-fourths of the solar heat, by test, is kept out, as compared to plain window glass; (4) temperatures created by heating and air-conditioning are more easily maintained; (5) the chance of condensation underneath is virtually ruled out; and (6) the blocks, with their reinforced concrete grid, present a soffit quite in harmony with modern ideas of design.

Further details in Sweet's; or your inquiry addressed to 2139 West Fulton Street, Chicago, will be welcome and have our prompt attention.

Light Up—the AMERICAN Way!

DAYLIGHT ENGINEERS

AMERICAN 3 way-Luxfer PRISM CO.

CHICAGO NEW YORK

Westinghouse *Electricana*

Showing how the wide scope of Westinghouse activities may aid you to select the most practical and efficient electrical equipment for your building projects.

★ You can look to Westinghouse for intelligent and helpful co-operation in the selection of electrical equipment for any type of building project. In the "electricana" below are examples of this diversified service. And, detailed data are easy to obtain. Just call the nearest Westinghouse office, and ask for "Architects' Clearing House," which provides special facilities for quick, effective action on your electrical needs.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
EAST PITTSBURGH, PA.

OUTDOOR ILLUMINATION, with inexpensive floodlights concealed in the trees, makes this garden and terrace charming and useful for summer evenings. Bryant weatherproof outdoor sockets and wiring devices give added protection for such installations.

MODERN KITCHEN PLANNING brings this convenient arrangement of range, refrigerator and work space in this Westinghouse-designed kitchen. You'll find useful our "Kitchen Planning Booklet," available from any Westinghouse office.

ELECTRIC AIR CLEANING in this modern office building provides more healthful working conditions, protects interior decorations, documents, pictures and other contents from dust, dirt and grime, reduces maintenance and cleaning costs. Supplied by Westinghouse *Precipitron*.

QUIET AIR CONDITIONING with Westinghouse equipment brings cool comfort to patrons of the New Orleans Little Theatre, built in 1797. Thus is combined the charm of the old with the utility of the new.

QUICK INFORMATION in Sweet's Catalog, with 100 pages of specifications and descriptions of Westinghouse electrical products for every building need. Special publications giving helpful selection and application information are available on request to any Westinghouse office.

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(*Continued from page 58*)

GAS-FIRED BOILERS, WATER HEATERS—Seven folders and leaflets have been issued by American Radiator & Standard Sanitary Corp., Bessemer Bldg., Pittsburgh, Pa. Four of the leaflets cover gas-fired boilers for all sizes of buildings, give construction features with cutaway views of each boiler, along with other necessary technical information. The other three folders are of envelope size, and devoted to automatic storage water heaters. Each gives complete information, including ratings on three of the popular heaters in the firm's line.

WASHABLE WALL COVERINGS—The Sanitas Service Division of Standard Coated Products Corp., 40 Worth St., New York, has issued, in a 9¼ x 8¼ book, a collection of decorator-styled designs of permanently washable, fabric wall coverings. The book presents selections for hotels, institutions, also contains suggestions for preparing walls and hangings.

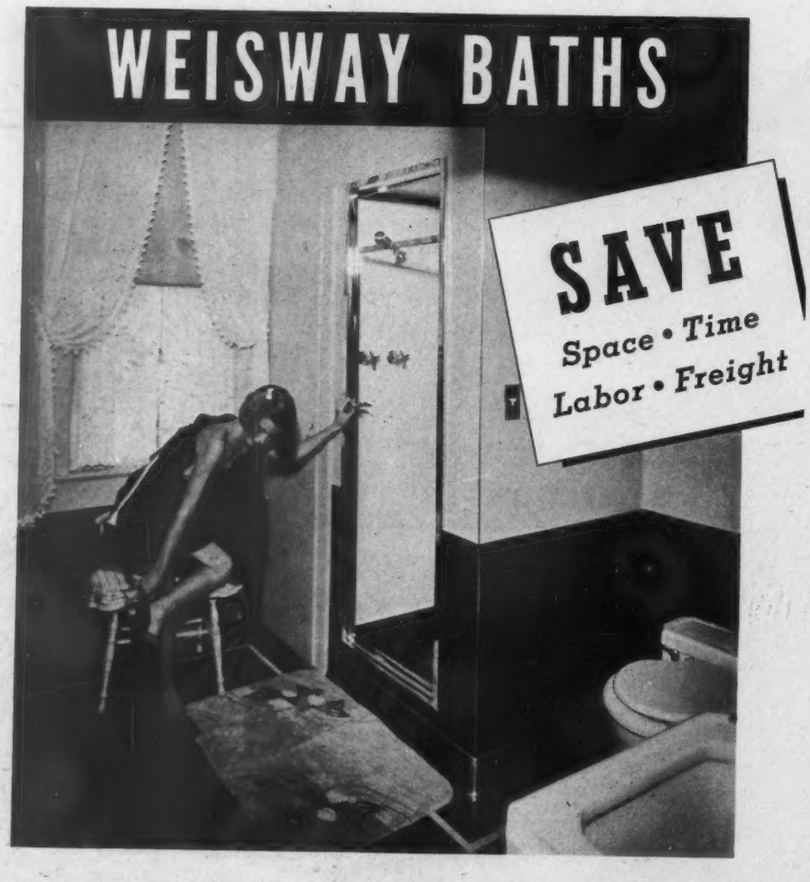
VIBRO INSULATORS—Stripped of highly technical descriptions of the problems of isolating vibration in machines, B. F. Goodrich Co., Akron, Ohio, recently published a 12-page catalog section on its Vibro-Insulators, the metal and rubber devices used to combat the vibration and noise problem. The section has installation pictures and engineer's drawings for each type of Vibro-Insulator.

ROOM VENTILATOR—"What Are You Breathing?" is the title of a two-color publication, 9 x 12, 4 pages, from Carrier Corp., Syracuse, N. Y., describing the operation of its new room ventilator. The folder shows how the window-type ventilator cleans and circulates the air you breathe at home and at the office.

FENESTRA DOORS, WINDOWS—Two new catalogs, Industrial Steel Doors, and Detention Steel Windows (A.I.A. File Nos. 16-E-I). The solid steel windows shown were developed for modern detention buildings. Specifications and details presented are fairly general in scope. The book on steel doors is complete, covers hardware, specifications, designs, and installations for all normal conditions. Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich.

COMMERCIAL VACUUM CLEANING—Bulletin No. 121R from Spencer Turbine Co., Hartford, Conn., describes the use of its vacuum cleaning equipment for stores, hotels, schools, theatres, churches, apartments, libraries, homes, clubs, other commercial institutions.

CONCRETE MASONRY WALLS—The National Concrete Masonry Association has prepared a four-page circular showing approved details for concrete masonry walls in six-story apartment house construction, and giving all building code references which apply. The use of hollow and solid concrete masonry in bearing walls shown are allowed by the building code of New York City. Construction details, cross sections of bearing walls, and details of concrete masonry units are shown. Available from Portland Cement Association, 347 Madison Ave., New York.



Match the Quality of Finest Plumbing Fixtures

● In modernizing or new building to meet today's acute housing requirements Weisway Cabinet Showers serve the national need for conservation. These independent, leakproof units provide a complete bath in a 3-foot square or less, without special treatment of building walls or floor.

Specify Weisways with full assurance that, in durability as in fine appearance, these modern cabinet showers meet the most rigid quality standards. Shipped knocked down at lower costs, these leakproof cabinets are easily, quickly installed—by one man if necessary. Receptor of everlasting vitreous porcelain enamel on Armco iron is light in weight, yet durable—requires no underpanning. Foot-Grip, No-Slip floor is safe, sanitary, easy to clean. Walls of vitreous porcelain, or baked synthetic enamel with 4-way protection against corrosion.

Write today for details and specifications on the complete Weisway line, for homes, industrial and institutional buildings. No obligation, of course. Henry Weis Manufacturing Company, Inc., *(Est. 1876)*, 1021 Oak Street, Elkhart, Indiana

WEISWAY Cabinet Showers

Free DON GRAF DATA SHEETS

This compact, comprehensive Specification Guide on TECO Termite Shields fits your Don Graf binder. Six sheets of condensed data to keep at your finger tips.

just write

TIMBER ENGINEERING COMPANY, Inc.

Dept. AB-10 1337 Connecticut Avenue,
Washington, D. C.

Please send me without obligation, immediately, the Don Graf Data Sheets on TECO TERMITE SHIELDS.

Name.....

Firm.....

Street.....

City.....State.....

(*Continued from page 46*)

fuller pallette the boys wouldn't have started roaring for the loot they were passing up. After all, everyone knows that the cake is only a vehicle to support the frosting, and the latter is what you remember as having made memorable the life which the cake sustained.

The ancient tradition of light reading, light music, and light mental strain in summer has in no way been abrogated in this cesspool of traditional procedure, yet our legislators have pegged along. The State Registration matter for architects passed the House, was emasculated by the Senate and tossed down for re-passage below. Seems the holy status of "registered architect" was left wholly optional, an ingenious stroke offending almost nobody and leaving the humble professionals a'feeling they had a toehold where heretofore nothing obtained. At the moment obscurity beclouds the final acceptance in the House.

Be it said that the Society and Association have both reacted quickly to all important matters despite the heat or humidity. The last named MSAA's announce a general meeting in Worcester, which will have opened the season, September 18.

Upstanding young Architect *Carroll Coletti* may have lapsed briefly from one meaning of the first word, by force of a bachelor's party in his honor, which will have been held some time before this note appears. That would imply that he's facing the only kind of ball and chain which hasn't been priorized by the government. The rest of us old hands lay our present contentment to the fact that we were foresighted enough to sneak in a rubber link.

LEON KEACH

ATELIER HIRONS

A. F. Euston, of the School of Fine Arts, Yale University, New Haven, Conn., is anxious to obtain the names of all Atelier Hirons men, asks that these men communicate with him.

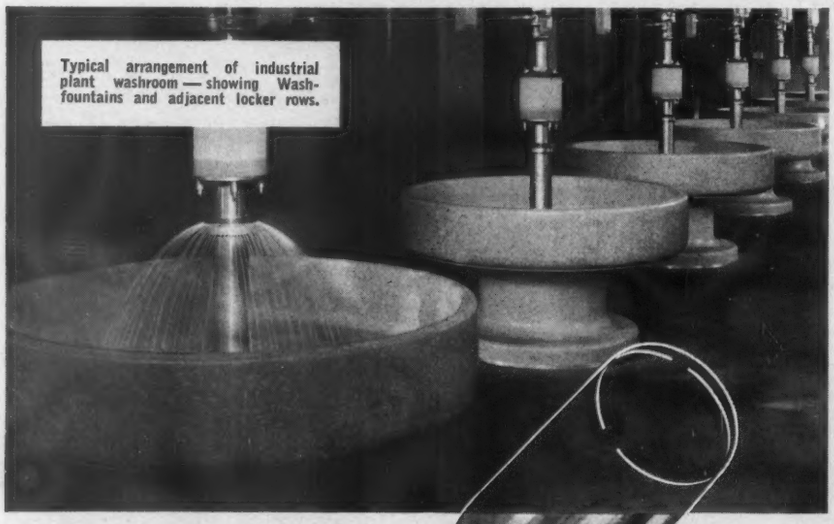
TEXAS CONVENTION

The second annual convention of the Texas Society of Architects was held at the Baker Hotel, Dallas, Tex., October 2nd to 4th inclusive. Feature of the three-day convention was an exhibit of architectural work and of building materials. *Ralph Bryan* was chairman of the general convention committees.

A.D.I. MEETING

"Design in the National Emergency" was the theme of an intensive two-day national conference held in New York October 3rd and 4th by the American Designers Institute. Featured speaker was *Dr. James F. Bogardus,* head of the Consumers Durable Goods Section of the OPACS, who was scheduled to speak to the designers on their relation to the emergency program from the Federal Government point of view. Various other aspects of the theme subject were to be discussed by prominent manufacturers, retailers, merchandise managers, style directors, to make possible a complete clarification of the designer's position in the present industrial picture.

Other speakers at the meeting were to include *Alfred Auerbach,* Editor of RETAILING; *Harvey Stevenson,* A.I.A. President, and Chairman of A.I.A. Civilian Defense Committee; *Leopold Arnaud,* Dean of Architecture, Columbia University.



DON'T LET THE WASHROOM BE ANOTHER BOTTLENECK

★ Dermatitis, according to physicians, heads the list of industrial diseases. Proper washing and bathing are effective preventive measures.

● Adequate, sanitary washing facilities are necessary to provide for the growing number of employees.

Bradley Washfountains are providing such facilities in thousands of plants. More than five million hands of industry are washed daily at Bradleys.

The central spray serves clean, running water to each of 8 to 10 persons simultaneously. The spacious deep bowl is self-flushing to prevent collection of water and possible contamination.

Bradleys thus save space, reduce piping connection 70 to 90 per cent, reduce chance of skin affections that may spread and cause many lost man-hours.

To show the spray, sprayhead and soap dispenser, men were cleared from side nearest camera.

Let our experienced Washroom Consultants help you. Their suggestions will save your time and assure the maximum facilities in given space. Bulletin 4010 will be mailed on request . . . BRADLEY WASHFOUNTAIN COMPANY, 2277 W. Michigan St., Milwaukee, Wis.

BRADLEY WASHFOUNTAINS

FOR SCHOOLS OF LASTING BEAUTY

specify versatile Douglas Fir Plywood inside and out!

● Architect Wm. H. Harrison specified Plyform for both the exterior and interior surfaces of the beautiful Lou Henry Hoover School in Whittier, Calif. The J & B Construction Co. was the contractor.

• • •

● The photograph below shows clearly the flawless beauty of the interior walls. There was no plastering. Paint was applied directly to the concrete.

There is a grade or type of this "modern miracle in wood" for every building purpose!

● Douglas Fir Plywood is ideal for schools and other public buildings. Used as walls, it takes punishment galore without showing it; is kick-proof; tests 5 times more sound absorbent than traditional wall material; provides excellent insulation; is receptive to any finish; can be quickly erected or taken down.

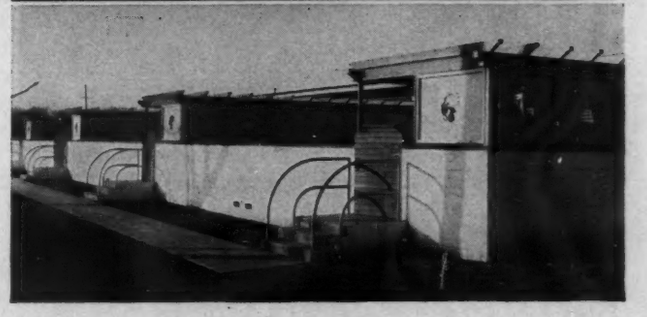
The water-proof type, EXT-DFPA, builds smart, durable, streamlined exteriors that are resistant to high winds and earthquakes.

Used as sheathing, 5/16" Plyscord, the utility grade, makes walls 6 times as rigid as horizontal board sheathing, several times as rigid as fibre board sheathing and 40% more rigid than diagonal board sheathing.

PLYFORM IS BOTH LINING AND SHEATHING

The concrete form grade of Douglas Fir Plywood, Plyform, has been used on virtually all the outstanding concrete schools in the nation. Plyform forms smooth, flawless concrete at lower cost; minimizes handling, carpentry and finishing; and gives numerous re-uses when handled with reasonable care.

Read the Douglas Fir Plywood section in Sweet's catalog or send for free literature. Consider how this versatile material can serve you and your clients better. Consider its large sizes, strength, light weight, damage-proofness and other advantages in relation to your problem. Then specify by the "grade trade-marks" shown below and be sure the plywood delivered to your job bears them. For they show the exact purpose for which each panel was manufactured in strict accordance with U. S. Commercial Standard CS45-40. Douglas Fir Plywood Association, Tacoma Bldg., Tacoma, Wn.



● The cut-outs around the individual play yards in the Jennie Baker Tucker School, El Monte, Calif., are in panels of EXT-DFPA, the type of plywood made with a water-proof bond for permanent exterior use. T. C. Kistner, architect.

GENUINE DOUGLAS FIR PLYFORM Concrete Form Panel D.F.P.A. INSPECTED

GENUINE PLYWALL Douglas Fir Plywood WALLBOARD D.F.P.A. INSPECTED

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

PLYPANEL D.F.P.A.

EXT.-D.F.P.A.

GENUINE PLYSCORD SHEATHING D.F.P.A. INSPECTED

PEASLEE HEADS CIVILIAN PROTECTION COMMITTEE

Horace W. Peaslee, Washington, D. C., Architect, and Chairman of the Air-Raid Protection Committee of the Washington Chapter, A.I.A., has been chosen to head a nationwide organization for civilian protection which is being formed by the American Institute of Architects, according to *Richmond H. Shreve,* A.I.A. president. Seventy-one chapters of the Institute, state associations of architects, and other architectural groups will participate in the movement. Architects will work with government and military authorities, and will relate their activities to the Office of Civilian Defense.

"It is in the public interest that the profession devotes its training and experience to coordinating the ramifications of planning and in applying its vision to reduce the waste and disruption that follow war," said a statement of the Institute made public by Mr. Shreve. O.C.D. Director LaGuardia welcomed architect cooperation.

Pen or Pencil

We could have brought out a pencil cloth when we introduced Micro-Weave Tracing Cloth, but we didn't because we were not satisfied with a "just as good" product. We wanted something better, and now we have it — sufficiently better to prove itself on the drawing board. Micro-Weave Pencil Cloth is made in a new way, and it has a surface with a real pencil affinity — you try it, and you will realize how much of an understatement the word "better" is.

SAMPLES ON REQUEST
Ask your dealer for Micro-Weave Pencil Cloth.

Micro-Weave All American TRACING CLOTH

The Holliston Mills, Inc.
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The dispensing roll container is a protection, a convenience and an identification. It keeps the cloth clean — handy brackets attach to desk or table.

OBITUARY

COL. H. B. HACKETT

Colonel Horatio B. Hackett, Architect and World War hero, died in Chicago, September 8th, aged sixty-one. After graduation from West Point in 1904 he served as an army lieutenant for two years, then became architectural superintendent of D. H. Burnham & Co. He served as a colonel during the World War, received several military decorations. After the war he became an executive of John Burnham & Co., an investment firm, and still later a member of the architectural firm of Holabird & Root.

In 1934 he was appointed general manager of the Federal Public Works Housing Corporation, from which post he went on to the PWA as assistant administrator. From March 1938 to January of this year he served as president of Thompson-Starrett, Inc., New York builders. He retired to become head of the Materials Service Corporation, which post he held at the time of his death.

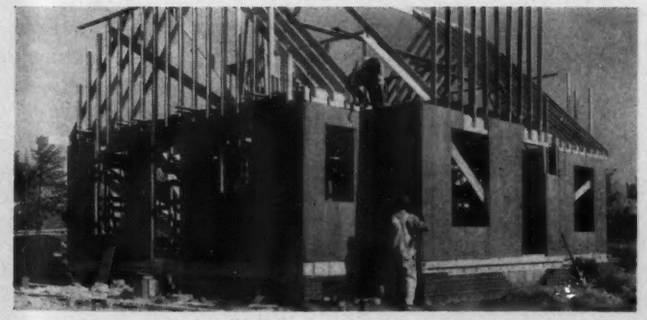
COL. F. L. V. HOPPIN

Colonel Francis L. V. Hoppin, of New York, a retired Architect, died at his Newport, R. I. home on September 9th. He was seventy-four years old. Col. Hoppin studied architecture at Brown University, and the Massachusetts Institute of Technology, spent two years in study in Paris. He worked for a time in the office of McKim, Mead & White in New York before engaging in independent practice. He retired some years ago. A painter as well as an architect, Mr. Hoppin gave several one-man shows of his water-colors in New York.

H. CRAIG SEVERANCE

H. Craig Severance, New York designer of skyscrapers, died on September 2nd at Neptune, N. J., following an operation. Mr. Severance, who was sixty-two, studied architecture both here and in France, began his professional career in 1900 with *Charles A. Rich,* designer of the World Building in New York. Following an association with the firm of Carrère & Hastings in New York, he began to practice alone in 1907. For a time after that he was the partner of *William Van Alen.* He had maintained offices at 36 W. 44th St., New York.

THIS FAMILY NAME IDENTIFIES A COMPLETE LINE OF QUALITY BUILDING INSULATION . . . SHEATHING, LATH, INTERIOR FINISH



◀ TEMSEAL SHEATHING

Sealed with a double coating of asphalt and strong kraft paper, this double seal prolongs the efficient life of the insulation by protecting it against infiltration of air and moisture. Applied like ordinary sheathing; comes in large boards, easily cut, quickly nailed in place; bracing strength approximately equal to that of wood sheathing laid on the diagonal.

TEMLOK LATH ▶

Provides a superior plaster base *plus* efficient insulation in one low-cost material, quickly installed in one operation. Supplied in conveniently sized boards which are shiplapped on long edges, scoop beveled on all four edges. This helps to assure finished plaster walls which are both smooth and strong.

◀ TEMLOK DE LUXE

For use as decorative interior finish. Several smart pastel shades in panel, plank, and board form. Also reflects light efficiently and helps to quiet noise. Quickly and easily erected to furring strips or solid bases. See "Sweet's" for complete facts, or write now for samples and illustrated literature. Armstrong Cork Co., Building Materials Division, 911 Concord St., Lancaster, Pa.

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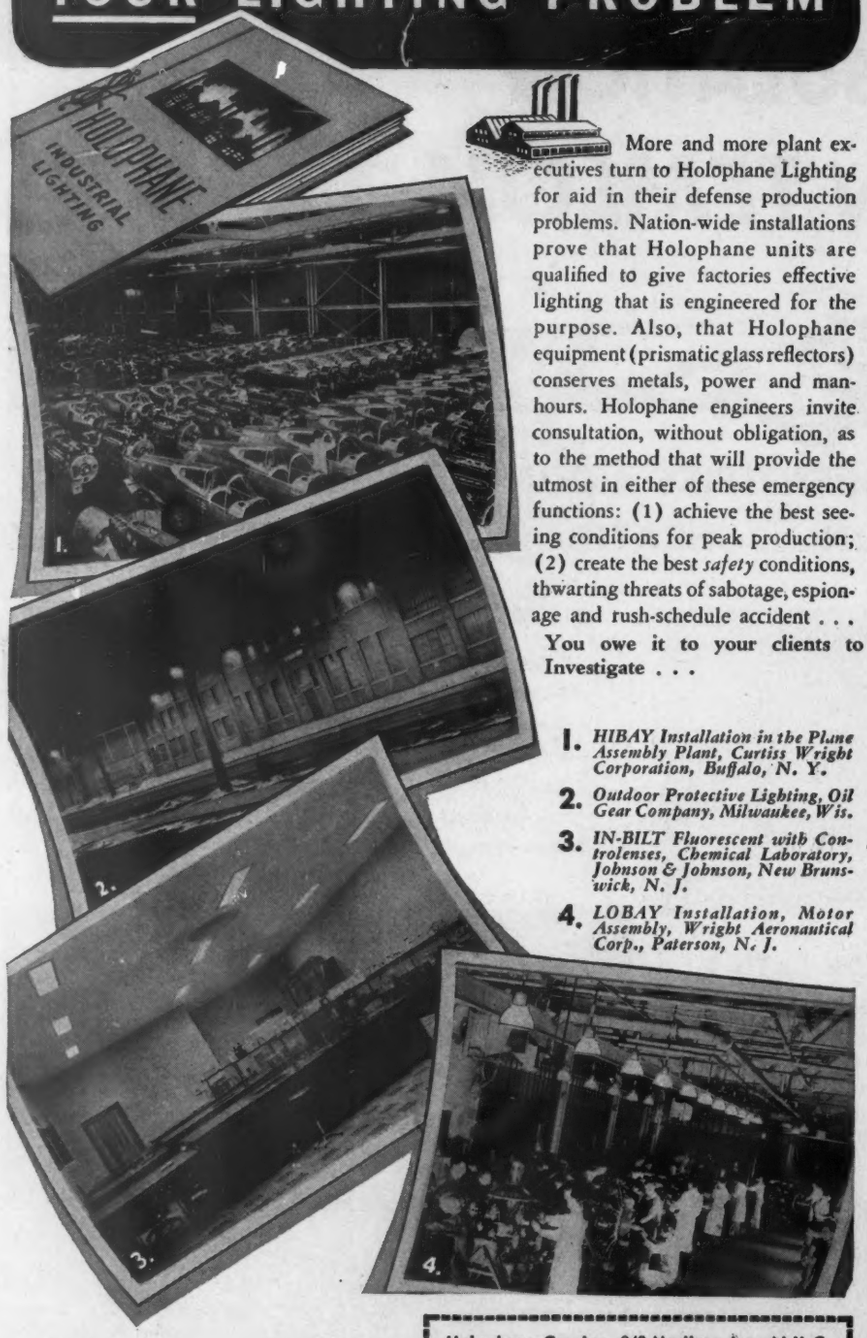
DEFENSE PLANT *Architects*:

Send for this Portfolio of Scientific Data on

YOUR LIGHTING PROBLEM



More and more plant executives turn to Holophane Lighting for aid in their defense production problems. Nation-wide installations prove that Holophane units are qualified to give factories effective lighting that is engineered for the purpose. Also, that Holophane equipment (prismatic glass reflectors) conserves metals, power and man-hours. Holophane engineers invite consultation, without obligation, as to the method that will provide the utmost in either of these emergency functions: (1) achieve the best seeing conditions for peak production; (2) create the best *safety* conditions, thwarting threats of sabotage, espionage and rush-schedule accident . . .

You owe it to your clients to Investigate . . .

1. *HIBAY Installation in the Plane Assembly Plant, Curtiss Wright Corporation, Buffalo, N. Y.*
2. *Outdoor Protective Lighting, Oil Gear Company, Milwaukee, Wis.*
3. *IN-BILT Fluorescent with Controlenses, Chemical Laboratory, Johnson & Johnson, New Brunswick, N. J.*
4. *LOBAY Installation, Motor Assembly, Wright Aeronautical Corp., Paterson, N. J.*

To speed the solution of any individual Lighting Problem call on Holophane. If you will check the coupon, an Engineering Portfolio, compiled for architectural reference on that particular phase of Lighting will be forwarded, without charge. . . .

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Please send me portfolio of data on:
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3. IN-BILT Lighting
(Fluorescent ☐; Incandescent ☐)
4. LOBAY Lighting ☐

Name_____

Address_____

CITY PLANNING

A graduate program in Regional and City Planning has been announced by the University of Michigan, Ann Arbor, Mich. As a major interest students will analyze and develop actual planning problems under the charge of the faculty. Visiting lecturers will act as consultants and will bring to these students, and to others qualified but not majoring in planning, discussions of current aspects of planning. Some of the visiting lecturers include *Earl S. Draper,* Federal Housing Administration; *Charles W. Eliot,* Director, National Resources Planning Board; *Frederick Bigger,* Planning Consultant, Federal Housing Administration; *Jacob Crane,* Assistant Coordinator, Division of Defense Housing Coordination; *Walter H. Blucher,* Executive Secretary, National Association of Planning Officials.

Further details on the course may be obtained by writing *Wells I. Bennett,* Dean of the College of Architecture and Design.

SCHOOL ARCHITECTS

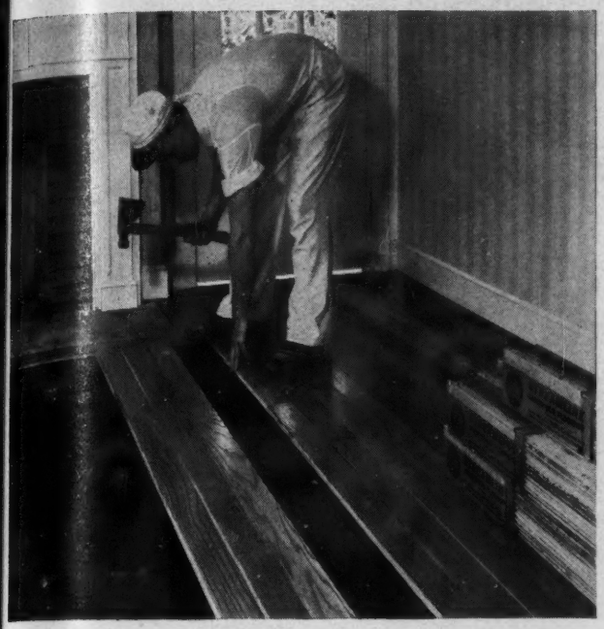
The directory of "Architects for Educational Buildings," which appears in THE AMERICAN SCHOOL AND UNIVERSITY, a yearbook for school and college executives, is now being revised for publication in the 1942 edition. Last year, names and addresses of some fourteen hundred firms which had served within the past five years as architects for two or more school or college buildings costing not less than $50,000 each were included in the directory.

There is no charge for the listings, and "professional cards" or other advertisements of architects are not published. Architects who would like to be listed should communicate with The American School & University, 470 Fourth Ave., New York.

RESTORATION PROJECT

The first unit of a restoration project intended to create a "Long Island Williamsburg" was dedicated on September 1st in Stony Brook, Long Island. The unit, a brick-and-shingle firehouse, is part of an early Colonial type shopping center. *Ward Melville,* shoe manufacturer, is spending $600,000 to restore the village along Colonial lines, much in the same manner of the Williamsburg restoration. It is expected that by next summer all the old buildings will have been replaced by new and architecturally-integrated structures.

FOR HARDWOOD FLOORS That are "RIGHT" Every Time



Specify *Factory-Finished* BRUCE STREAMLINE FLOORING

There's no guesswork when you specify Factory-Finished Bruce Streamline Flooring. Every square inch has been uniformly finished at the Bruce Plant on special machines. Nothing more to do—ready for use as soon as laid.

The finish penetrates the pores of the wood—stubbornly resists scratches, chipping and peeling. Stays beautiful for years without the need of refinishing.

Streamline comes in Oak, Maple and Beech. Three sizes: 25/32" x 3¼", ½" x 2½", or ⅜" x 2". Easy to install—laid just like regular strip flooring. Usually costs *less* than ordinary flooring finished on the job. Nationally advertised. Mail coupon for full details.

MAKE THIS "SCRATCH TEST"

Half of panel finished new "Bruce-Way"; half ordinary surface way. Scrape a coin across both surfaces. See how ordinary finish chips away — "Bruce-Way" Finish is unharmed!

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FLOOR FINISHES • TERMINIX • LUMBER PRODUCTS

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E. L. Bruce Company · 1465 Thomas Street · Memphis, Tenn.

Gentlemen: Please send FREE "Scratch-Test" panel and full details about Bruce Streamline Flooring.

Name.....

Address.....

City.....*State*.....

THE MARK OF SUCCESSFUL

AIR CONDITIONING

Illustrated above is the Supreme Court Room, Department of Justice Building, Raleigh, N. C. — Northup & O'Brien, Architects, Winston-Salem, N. C. Lighting Fixtures in combination with ANEMOSTAT Draftless Air Diffuser designed and manufactured by Benson Manufacturing Co., Kansas City, Missouri.

ANEMOSTAT *Draftless* AIR DIFFUSERS

The answer to successful air conditioning is **correct air distribution.** ANEMOSTATS on duct outlets assure correct air distribution by **equalizing temperatures and humidity,** and **eliminating drafts.** As a result, completely comfortable conditions are maintained and operating costs are reduced. That is why ANEMOSTATS are familiar fixtures in all types of buildings, where air conditioning at its best is demanded. ANEMOSTATS are easily installed and may be applied to existing systems as well as new installations.

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STANLEY "Swing-Up" Hardware for any garage you build

There is a set of Stanley "Swing-Up" Hardware for any garage door. It can be as easily installed on specially designed doors as on any pair of stock doors. Old doors as well as new. This modern upward-acting hardware set gives you free rein on styling effects. But keeps costs down for your clients.

Doors equipped with Stanley "Swing-Up" Hardware open easily in any weather – even when snow banked. A slight pull starts them up. Heavy springs float them into position – well out of the way.

SAVE TIME ON SPECIFICATIONS

Stanley Catalog No. 61 is a 295-page reference book for architects. It gives you detailed drawings and specifications on "Swing-Up" Hardware and the complete line of Stanley building hardware. Free to architects. For your copy write The Stanley Works, New Britain, Connecticut.

STANLEY

HARDWARE FOR CAREFREE DOORS

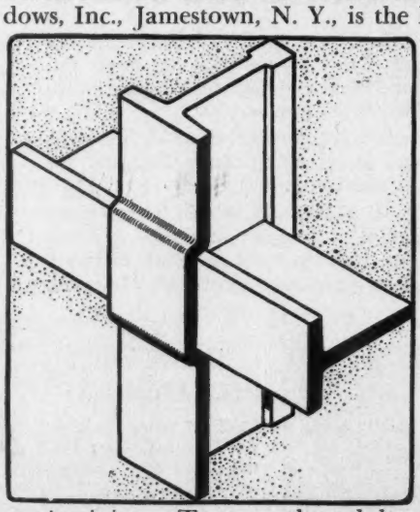
NEW PRODUCTS

SUNDIAL-PLANETARIUM

A sundial which gives the exact geographical location on earth of the individual operator, watch time within a minute or so of the U.S. Naval Observatory time, as well as numerous other interesting facts and desirable information, is being made by Position Finder Corp., 1012 Navarro St., San Antonio, Tex. Attached to each Hagner sundial and planetarium is the owner's personal bench mark, which includes the latitude and longitude of his home or estate. Fashioned of bronze or aluminum alloy, with natural finish wood base, the model shown has an altitude arc, latitude arc, declination arc and slide, a meridian circle, time indicator, other features to show in a highly interesting and instructive manner the movements of the universe, all correlated to the latitude and longitude of the observer.

LOK'D BAR SASH

Feature of the Lok'd Bar Sash from Hope's Windows, Inc., Jamestown, N. Y., is the hydraulic closing of vertical and horizontal muntins which retain their full strength throughout the entire length of the sash. The Lok'd Bar is closed by air pressure, and intersecting bars are mutually embedded and interlocked at the joints. Tests conducted by the firm have revealed that the full section modulus of the sash is 0.085, and that the sash withstood a load of 700 pounds without breaking. Ventilators are constructed as complete casements and frames, solid welded at all corners, flanged inside and out to give broad, continuous, double contacts. Since each vent is a solid welded unit it reinforces the sash where the void is left for its reception. The Lok'd Bar Sash comes in various standard types and sizes, with or without vents.

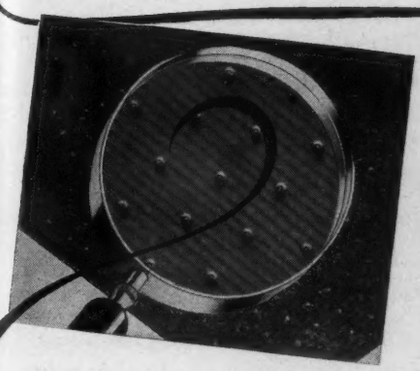


DECORATED ACOUSTICAL MATERIAL

A new decorative effect for acoustical ceilings of offices, stores, restaurants, schools, and theaters is made possible through a recent development of the United States Gypsum Co., 300 W. Adams St.,

(Continued on page 78)

ROOFING FELT? LOOKS MORE LIKE A SIEVE TO ME!

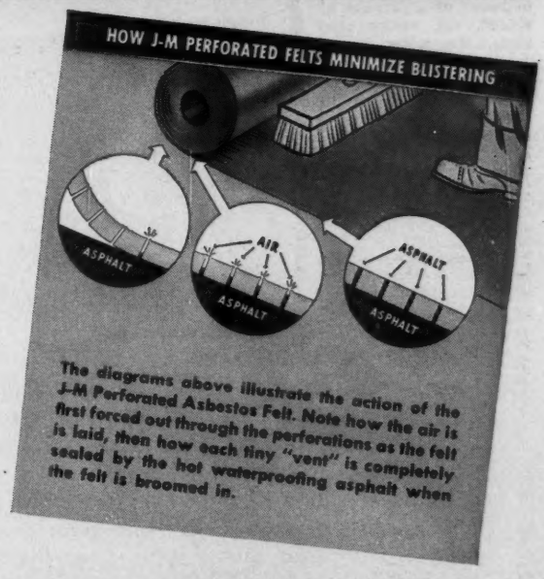


But these millions of tiny holes in the new J-M Perforated Asbestos Felt actually mean a better Built-up Roof... Read why:

IMAGINE making a better built-up roof by punching holes in the felts! Yet that's exactly what has been done in the J-M Perforated Asbestos Felt! And the "safety-valve" action these holes provide is sound and easy to understand. It works like this: The minute perforations permit trapped air to escape as the felts are laid, thus reducing objectionable blisters to a minimum. But once the felts are in place, the tiny holes are completely sealed by the waterproofing asphalt!

More flexible and easier to handle, J-M Perforated Felts are quickly broomed into place . . . adhere snugly to the roof deck and to each other. No wonder you get a better built-up roof!

J-M Smooth-Surfaced Asbestos Roof, built with the new Perforated Felt is rotproof, fire-resistant . . . need no protective coating to withstand the sun's drying-out action.

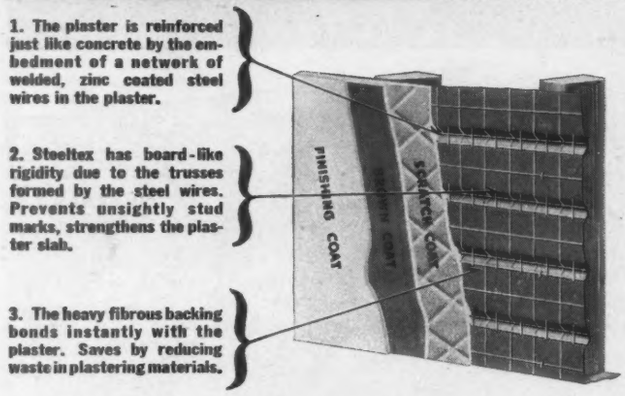

HOW J-M PERFORATED FELTS MINIMIZE BLISTERING
ASPHALT
AIR
ASPHALT
ASPHALT
ASPHALT
The diagrams above illustrate the action of the J-M Perforated Asbestos Felt. Note how the air is first forced out through the perforations as the felt is laid, then how each tiny "vent" is completely sealed by the hot waterproofing asphalt when the felt is broomed in.

Send for the free 48-page book, "Things You Should Know About Your Roof." Johns-Manville, 22 E. 40th St., New York, N. Y.

JM JOHNS-MANVILLE
Smooth-Surfaced
ASBESTOS BUILT-UP ROOFS

THE ROOF WITH THE SAFETY FACTOR

LASTING PLASTER BEAUTY NEEDS Steeltex REINFORCEMENT


1. The plaster is reinforced just like concrete by the embedment of a network of welded, zinc coated steel wires in the plaster.
2. Steeltex has board-like rigidity due to the trusses formed by the steel wires. Prevents unsightly stud marks, strengthens the plaster slab.
3. The heavy fibrous backing bonds instantly with the plaster. Saves by reducing waste in plastering materials.
FINISHING COAT
SCRATCH COAT

For smooth, crack-resistant permanence, plaster walls require the reinforcing action of Pittsburgh Steeltex plaster base. Only Steeltex binds plaster into integrated walls and ceilings through the embedment of its network of wires. Economies in price, labor, and materials make it cost less than other near-comparable metal lath construction. Steeltex eliminates lath and stud marks, minimizes and controls cracking, reinforces plaster like concrete, adds structural strength, helps plaster cure properly. Ask for literature.

PITTSBURGH STEEL COMPANY
Construction Products Division
1664 GRANT BUILDING · PITTSBURGH, PA.

Pittsburgh Steeltex FOR PLASTER

(Continued from page 76)

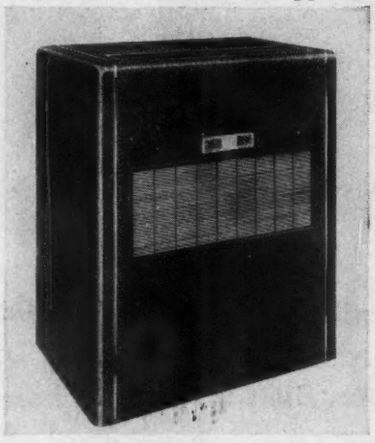
Chicago, Ill. The innovation is called Motif'd Acoustone, is produced by etching patterns upon the sound-absorbing surfaces of Acoustone. The effect obtained results from the patterns created by a difference in the surface texture of the etched and unetched areas, rather than from garish colors. No painting is required unless a colorful ceiling is desired, in which case the product may be painted without reducing its acoustical properties.

In addition to a selection of basic patterns that are available, architects and designers are given a free hand to create and design their own patterns. The texture and its soft, warm colors, combined with high-lighted basic patterns, give an effect that may be made to harmonize with any architectural scheme of a room or building.

Feature, too, is the spline-alignment which produces a self-leveling surface on which all corners and edges of each unit are in exact position.

PACKAGED AIR CONDITIONING UNIT

Especially designed for small stores, office suites, residences, and similar applications is this SU-20 Unitaire air conditioning plant from Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. The unit provides year-round air conditioning. A steam or hot water heating coil may be added for winter operation. It may also be remotely located with ducts connected. Installation work consists simply of making necessary water and electrical connections.



The 16-gauge steel cabinet is built in one section, houses all of the mechanism. Two reciprocating condensing units instead of the usual single unit are used. One or both may be operated for close control of temperature and humidity under varying load conditions. The centrifugal blower fan delivers 1000 cubic feet per minute.

Safety feature is the spring-loaded valve which will open in case of abnormally high discharge pressures. It closes automatically when normal pressures are resumed.

ZINC COAT RUSTPROOFING

A new system of rustproofing metal during production, known as Irco Zinc Coat, has been announced by International Rustproof Corp., 12507 Plover Ave., Cleveland, Ohio. Zinc Coat is the base material for a hot, chemical-bath process of treating metal to produce a permanent, resistant, and insoluble film of neutral zinc phosphate on metal. This coating is a foundation coating, not a finish coating. Weatherometer tests conducted by the firm show that Zinc Coat plus paint is equal to hot dip galvanizing. The coating is absorbent, produces a bonding surface over which industrial finishes may be applied.

(Continued on page 80)

ONE PRODUCT

Our one product is COLD STORAGE DOORS.
Incorporated in every JAMISON-BUILT DOOR are the results of over 50 years' experience by engineers devoting their entire time and energy to this specialty. You benefit. You get better doors per dollar!
Consult nearest branch or address JAMISON COLD STORAGE DOOR CO., HAGERSTOWN, MARYLAND.

JAMISON-BUILT Super Freezer Door for lowest temperatures. See Bull. 126

Jamison, Stevenson and Victor Doors

JAMISON-
BUILT COLD STORAGE DOORS

See our Catalog in Sweet's Catalog File

Specify PLASTI-GLAZE

Plasti-Glaze is the glazing compound to specify and use on low maintenance buildings or where the government requests NO Maintenance for 25 years.

THE MOST MODERN PRODUCT FOR GLAZING BOTH STEEL AND WOOD SASH.

PLASTI-GLAZE—the long-life glazing compound—contains more oil (and it's heavier-bodied oil!) than you'll find in any putty. The new Chrysler Tank Plant and Hudson Gun Arsenal are among the many large buildings glazed with Plasti-Glaze. It glazes with ease—is moderate in cost—can be painted immediately, remains permanently plastic.

By specifying this satisfactory product, your glazing problems will be forever ended. PLASTI-GLAZE is guaranteed by America's largest producers of glazing products. Write for complete information.

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PLASTIC PRODUCTS COMPANY

In the South PLASTOID PRODUCTS CO. INC. NEW ORLEANS

GENERAL OFFICE 6481 GEORGIA AVENUE • DETROIT, MICHIGAN

CURE AND PROTECT ALL CONCRETE WITH . . .
SISALKRAFT

SPEED
ECONOMY
EFFICIENCY

Just cover the fresh slab with SISALKRAFT — and forget it. This air-and-moistureproof paper seals in the water of the mix—thus effectively curing and protecting at the same time.

No sprinkling, no watching — with resulting savings in labor. No sand, straw, burlap or tarps. SISALKRAFT cures and protects at ONE low cost.

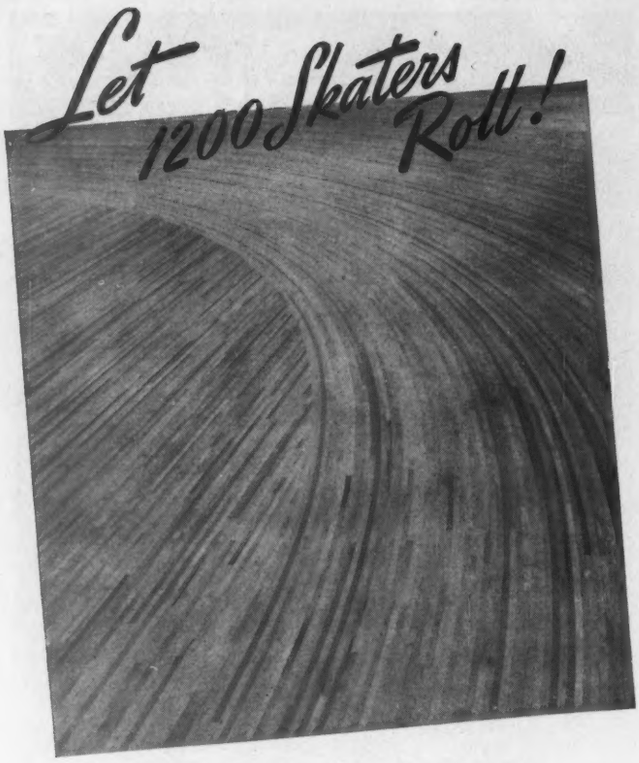
Gives hardness, strength and wearing qualities comparable to curing by complete water immersion. It's "automatic" —takes out the guesswork.

Write for file of data

The SISALKRAFT Co.
205 W. WACKER DRIVE • CHICAGO, ILLINOIS
New York San Francisco

AT TERMINALS
such as this at Love Field, Dallas, Texas
SAVE THE DESIGN—CONTROL THE DOOR WITH
LCN • 466 W. Superior St., Chicago

LCN



It's Northern Hard Maple and Maple Can Take It!

No mystery about Maple in the Western Hills Rollatorium, at Cincinnati, America's largest skating rink.

"Our reason," says R. Schaumleffel, President, "for using Hard Maple was that it proved to be the best type flooring that can be used in a skating rink and that it can take a lot of hard wear."

As simple as that, but it tells the story. Every night up to 2100 people take a whirl at the 33,000 square feet of **MFMA** Maple—up to 1200 people at a time—9600 rolling, grind-wearing wheels digging at Maple hour after hour, night after night.

But Hard Maple stands up. This tough-fibred, tight-grained wood, so amazingly resistant to abrasion, takes roller rink punishment like nothing else can, keeps its smoothness—is easily cleaned.

Stamina like this makes Hard Maple the logical choice wherever long life, cleanliness, and low maintenance in floors are the need—in factories and schools, bakeries and stores—and in homes, too. Don't build or remodel without checking Hard Maple.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1785 McCormick Building, Chicago, Illinois

Floor designed, laid in mastic over concrete, by Cincinnati Floor Company. Flooring was laterally nailed and rolled with heavy roller before sanding. Result is a remarkably level, smooth and quiet roller rink floor.

Floor *with* **MFMA** Maple
(NORTHERN HARD)

(Continued from page 78)

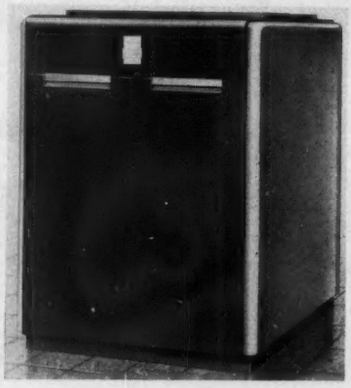
COPPERWELD WALL TIES

Copperweld Steel Co., Glassport, Pa., is now manufacturing, as standard items of production, high strength, non-rusting wall ties for cavity brick walls. The ties, known as Copperweld 204-30″ Non-Rusting Wall Ties, are made of .204″ high strength Copperweld wire having a minimum breaking strength of 3934 pounds. Standard ties, for 10-inch cavity brick walls, are six inches long overall, with either 3″ or 1¾″ opposite right-angled anchor legs.

Copperweld wire used in the production of these ties is a wire having a steel core protected against corrosion by a thick, welded-on covering of pure copper. In the lower half of the illustration may be seen a cutaway view of the wire used in the cavity brick wall ties.

GAS-FIRED AIR CONDITIONER

The new Mohawk gas-fired winter air conditioner is streamlined, has a durable steel jacket finished in two-tone blue with suede texture, to harmonize with playrooms or extra rooms. It is a completely automatic unit that provides the comfort of winter air conditioning. The nine sizes of the Mohawk, with inputs ranging from 60,000 to 300,000 Btu per hour, are designed to cover all sizes of installations from the small to the larger type of home.



Feature of the Mohawk is Pre-Heated Air which results in a saving of fuel, according to the manufacturers, since the return air from the living quarters is pre-heated before entering the heating compartment, resulting in faster and more economical heat.

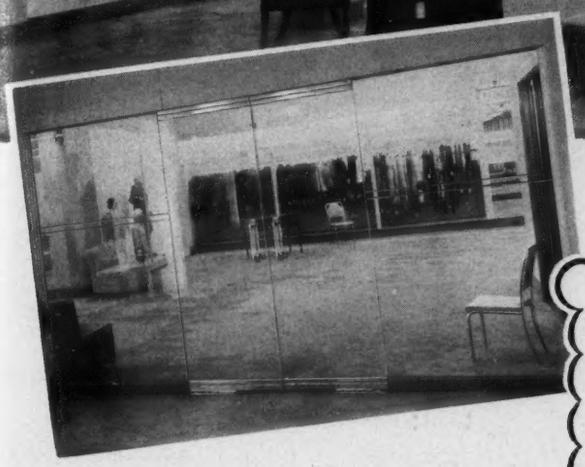
The burner is made of cast iron with patented high temperature alloy, corrugated ribbons. The unit is quiet in operation, burns natural, manufactured, mixed, or bottled gas. Made by American Radiator & Standard Sanitary Corp., Bessemer Bldg., Pittsburgh, Pa.

PENETRATING FLOOR FINISH

Penetex, a new penetrating preservative for wood floors, is adaptable to all kinds of wood floors—plank, parquet, tongue-and-groove. It not only preserves the top, according to the firm, but also preserves the floor as far as it penetrates. A gallon will cover between 800 to 1,000 square feet, one application, depending on the porosity of the

(Continued on page 82)

BEAUTY AND UTILITY are contributed to Jordan Marsh Company, Boston, by the skillful use of Pittsburgh Glass. In the Fur Salon, the pillars are sheathed on all four sides with brilliant Pittsburgh Mirrors. And PC Glass Blocks, with concealed lighting effects, create an interesting effect in the background.



HERCULITE DOORS make the entrance to the Fur Salon unusually inviting. Strong, durable and crystal-clear, these tempered glass doors and side panels make an immediate favorable impression upon customers.

GLASS IN THE MILLINERY DEPARTMENT is both decorative and practical. Double-faced Pittsburgh Mirrors give accurate reflections at the "try-on" tables, and each table has a good-looking, protective Plate Glass top. Counters are furnished with mirrors, too.

Glass gives new appeal to Jordan Marsh store

(ARCHITECT: EDWARD M. CONBOY)

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DOUBLE-WHITE house, Darien, Conn., prize-winner House Beautiful's small house competition. Architect: George T. Gillette, New York City.

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New Edition—Just off the Press. Shows many prize-winning houses painted with Cabot's DOUBLE-WHITE, *Old Virginia White,* Gloss White and Gloss Collopakes in colors. Contains full information. Write for your copy and color card today. Samuel Cabot, Inc., 1295 Oliver Building, Boston, Mass.

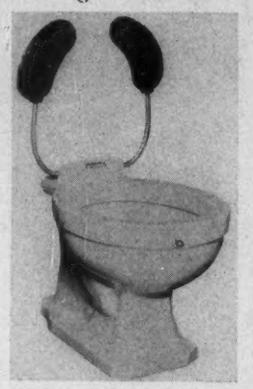
Guest House, Brookfield, Connecticut. Paints: Cabot's Gloss Collopakes in Haddam Barn Red; trim Cabot's DOUBLE-WHITE. Architect: Burton Ashford Bugbee.

(Continued from page 80)

wood. Oil stains are easily blended with the finish to produce various transparent colors. Penetex will not scuff off or chip off because it is in the wood. Described in Bulletin 519 from Truscon Laboratories, Detroit, Mich.

SELF-RAISING SANITARY TOILET SEAT

Expressly developed for use in public rest rooms and large manufacturing plants is this new toilet seat, known as the Sperzel Self-Raising Sanitary Seat. It embodies three new construction principles. The seat consists of two scientifically-designed Bakelite seat pads attached to a plastic-covered steel rod. The pads, the only part of the seat which touch the body, are easy to clean, can be furnished with inexpensive tissue covers for complete protection. A patented spring hinge pulls the seat erect and away from the bowl when not in use. This self-raising action keeps the seat perfectly dry at all times, eliminates the possibility of damage to bowls from falling seats. The seat is easily attached to any standard bowl, has a spring tension bolt to eliminate possible slipping or weaving.



Product of Sperzel Sanitary Seat Co., 1033-35 Metropolitan Life Bldg., Minneapolis, Minn.

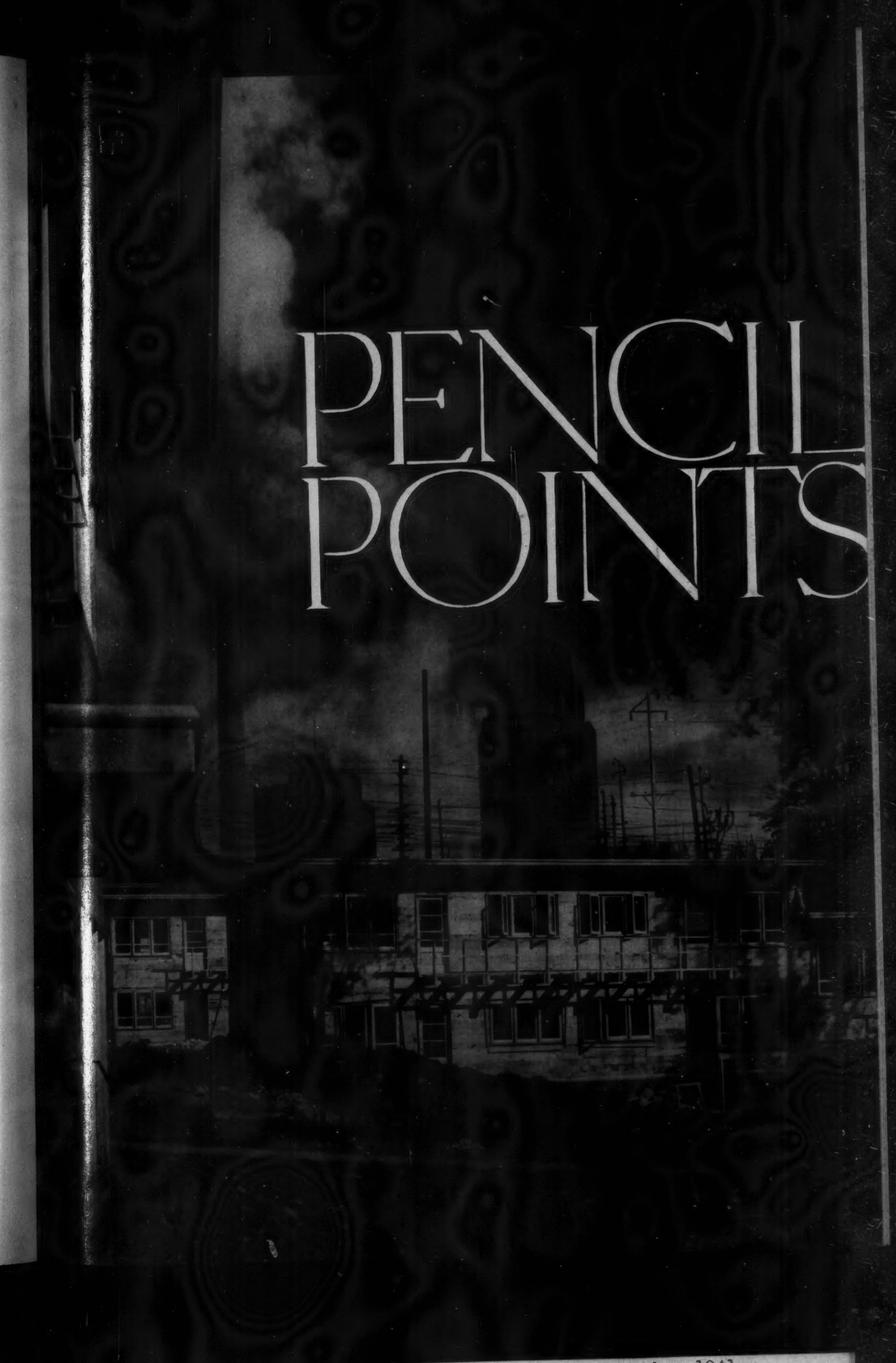
BUILT-IN VENTILATOR

A polymerin-finish grill has now been added by Victor Electric Products, Inc., Robertson Road, Cincinnati, Ohio, to its In-Bilt ventilator line. Polymerin, a quick-bake enamel finish, is said to harmonize with the white and chromium of modern kitchen appliances. In addition to protecting the surface of the In-Bilt from heat, grease, dust, cold, and steam, the finish will resist nicking and marring, is easy to keep clean with soap and warm water.

ACOUSTICAL MATERIAL

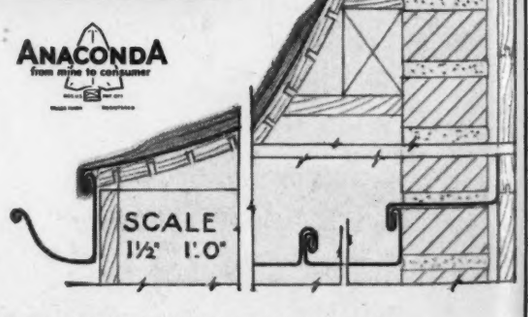
A low-cost acoustical material, said to possess an unusually high degree of sound-absorbing efficiency, has been developed by Armstrong Cork Co., Lancaster, Pa. Made of a special-density fibrous composition, the material is called Cushiontone, has 484 deep perforations per square foot. Standard unit sizes are 12 by 12 inches, and 12 by 24 inches. Three standard thicknesses are available: ½, ⅝, and ⅞ inches. The material may be installed on any rigid level surface, while the ⅞-inch unit may be erected to furring strips by nailing.

Cushiontone may be cleaned with a vacuum cleaner or wall paper cleaner, or may be repainted with any standard paint without loss of acoustical efficiency. It is said to provide a high degree of glare-free light reflection, but acts as an insulating material. Since it is light in weight, Cushiontone does not require any wall or ceiling reinforcement before installation. Although its standard ivory color blends well in most cases, the material may be refinished to harmonize with the decorative scheme in offices, stores, theatres, and in other buildings where humidity conditions are not excessive.


PENCIL
POINTS

TYPIFYING the manner in which standing seam sheet copper roofing may be used over entrances to impart both warmth and color . . . and to accentuate the structure's individuality.

ANACONDA
from mine to consumer



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PENCIL POINTS, published monthly by Reinhold Publishing Corporation at East Stroudsburg, Pa. Publication office, East Stroudsburg, Pa. Editorial and Advertising Offices, 330 West 42nd Street, New York, N. Y. Yearly subscription $3.00, single copies 50 cents. Entered as second class matter, July 8, 1941, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879. Volume XXII, No. 11, Dated November, 1941.

THANK YOU FOR YOUR COOPERATION

Architects are probably "questionnaired" more than any other professional group. It must get to be a nuisance! Consequently, we have been gratified by the response to the "Cooperative Editorial Quiz" that we mailed to our architect subscribers a few weeks ago.

No names were requested. And as a result, although many signed the questionnaire, it is not possible to express our appreciation individually. But we want to thank sincerely all of you who took time and thought to assist our Editors.

The results, we are glad to report, generally confirm our editorial policy of publishing a magazine solely for the architectural profession — a policy which has gained for us the largest architectural professional circulation in the history of architectural publishing. But most encouraging is the overtone of sincere interest and genuine affection that has characterized the letters of praise, of admonition, and advice written on hundreds of the returned questionnaires.

Many valuable suggestions, many thoughtful criticisms were received. Certain departments are more valuable than others; there will probably be some changes in at least two of the regular departments as a result of your suggestions. We always welcome any thought you may have which will enable us to make PENCIL POINTS ever better, ever more useful to you.

Publisher

THE THRESHING FLOOR

So many of our friends have been curious about the answers and suggestions we may have received through our recent "Cooperative Editorial Quiz" that it seems appropriate to print here comments selected from the first thousand answers. We regret that limited space does not permit us to reproduce in full many of the courteous, helpful replies. But we ask our readers to regard the following excerpts as representative:

"Keep it an architectural magazine. Stress design excellence and present technical data for the general improvement of architectural knowledge."

"To meet the competition of engineering and construction firms, architects must soft-pedal art. I stress their practical thinking. In practice an architect must be extremely practical to succeed."

"I much preferred the old PENCIL POINTS. It was devoted more to drafting technique. It was a magazine in a class by itself."

"Go ahead and run your paper the way you always have and quit dithering about what your subscribers think they want."

"I would subscribe to PENCIL POINTS if it had nothing but The Monograph Series. As it is, I prefer PENCIL POINTS to all other magazines."

"The biggest criticism I have to make of PENCIL POINTS is that it is like other architectural magazines, too prone to feature Eastern work and practically no representation of work done in the Middle West."

"Being interested in historical architecture, mainly Early American architecture from all parts of the United States, I should like a continuation of The Monograph Series of Early American architecture. I enjoyed them considerably."

"I no longer have any use for colonial houses and colonial details. . . . I now throw away 85% of PENCIL POINTS. What is Gropious doing at Harvard? van der Rohe at Armour? Moholy-Nagy at the School of Design? F. L. Wright at Taliesin? Antonin Raymond at New Hope?"

"As the small office is still the backbone of the profession it might be well to dig into this field. The level of American architecture is based not on the achievements of the top 10% but on the rank and file. How is the individual practitioner making out?"

"The fact must be recognized that the magazine will be distributed to professional men, many of whom are fully capable of producing work either as good or better than presented on your pages. For this reason, all of the work presented on your pages must be of the highest quality. Don't waste our time wading through mediocre work."

"I find that PENCIL POINTS still makes its appeal to the draftsman. Why help the draftsman to think as a draftsman in preference to making architects of our draftsmen? This is crudely expressed but I think you get my point. The smug little gossip of offices and pencil-pushers is a lot of damn nonsense."

"Can't you drop this foreign factory type of places? They cannot be called houses, much less homes. I predict that in a few years hence, when folks who have those abominations try to sell them, they'll find it better to put four sticks of dynamite at strategic points and blow them to Kingdom Come."

"I have a strong feeling that it would be well for each of the architural magazines to keep to a definite policy which would not overlap that of the others. To my mind the chief field for PENCIL POINTS is in the æsthetic side of architecture —rather than building construction, business, or engineering."

"Thanks for this opportunity to express an opinion. Might I suggest the elimination of many articles consisting mainly of hot air, and publishing more technical articles, color plates, portfolios, details, etc. . . . If there is one suggestion I could make about the whole architectural profession, it would be to get down to earth and eliminate so much blah, blah."

"Short-cut discussions of strength of materials and design, together with reference tables may be beneficial and interesting at times."

"The inclusion in your magazine of reports of the activities of starry-eyed economic planners, in my opinion, lowers the tone of a scientific professional magazine, since in years to come the world will laugh at such childish efforts to alleviate distress by elevating ignorance of natural law and permitting it to parade as science."

"It is difficult to express my attachment to PENCIL POINTS. But it seems to represent architecture as we like to feel it is (or perhaps wish it could be) . . . I am sure that this questionaire will reveal a host of readers as loyal as I."

"Don't fail to continue The Monograph Series. Suggest going South and picking up a few things in Virginia, Charleston, and New Orleans, etc."

"The best to be obtained for the money at twice the price."

"The subject of old colonial architecture has been pretty well covered—would strongly suggest its discontinuance."

"My only suggestion is that you try to avoid, as much as possible to do so, ending an article or series on the right hand page, and starting a new series on the left."

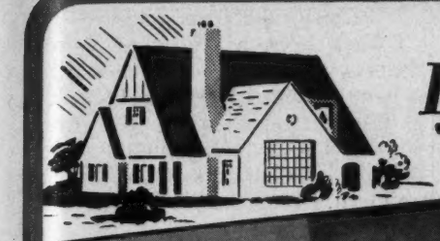
"More useful advertising like the U.S.G. Co. with specs. I believe the most useful subject you could include for every man in the profession is an outline of good specification procedure — streamlined, and a system of application with least amount of effort."

"I have always enjoyed PENCIL POINTS as a magazine although I believe in recent years you have taken it away from the draftsman and given it to the architect. Do not drop Don Graf. He is tops!"

"My interest in PENCIL POINTS has been due to its analyzation and presentation of design in all its phases as an inspiration and in cases as a guide."

"Consider it extremely valuable in recalling the happier phases of architecture as such—'Commoditie, firmnesse and delighte.' "

(Continued on page 12)



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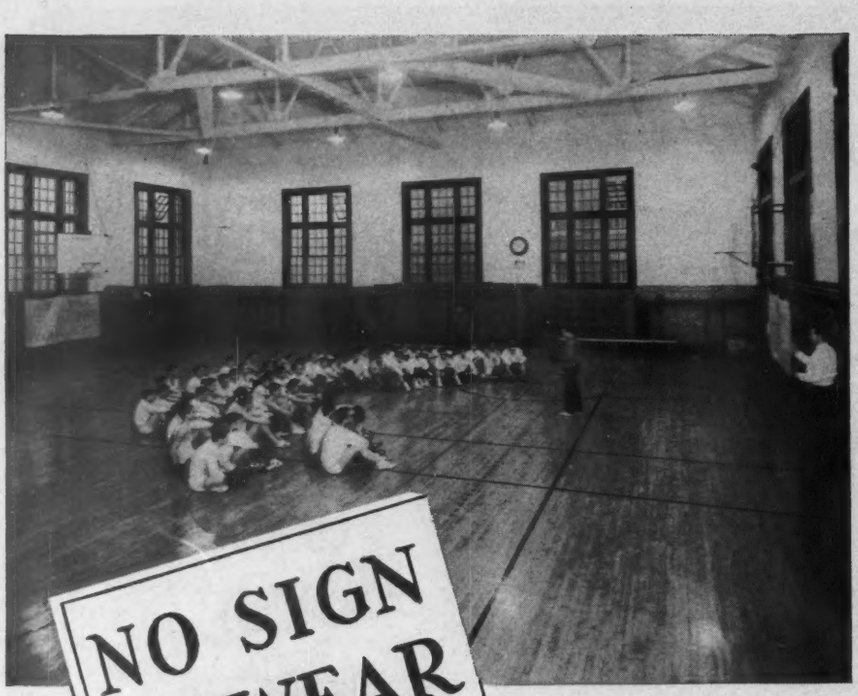

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(Continued from page 10)

"I have been a reader of PENCIL POINTS for years—and subscribed whenever I can afford it—I think it is the best magazine for the young architect especially one who has not gone overboard or haywire for modern. 'Keep on the beam.'"

"Most of our time is spent making drawings and anything that will help us better our own work is valuable. Other architectural magazines seem to have dropped this."

"As all of us file our magazines, why not have articles set up so that there can be no conflict on the opposite sides of the same pages. All architectural magazines make this mistake, and it would be tough to have to take two subscriptions to each in order to have complete articles and photographs."

"I would like to have a rendering by an outstanding renderer shown on the cover each month rendered by some of the following: A. Thornton Bishop; Otto Eggers; Schell Lewis; Ted Kautzky; Ernest Born; Chester Price; Floyd Yewell, and A. L. Guptill."

"I think its clear, open pages give a layman a very good impression of us."

"I like articles describing model trends in design, and the coming trends."

"Seems to me a pertinent subject would be the use of substitutes for materials now unavailable."

"As one person in practice I appreciate that you do not feel the necessity of 'pushing' Modern."

"Suggest helpful information for specification writers, for estimators, inspectors, and supervisors."

"I would subscribe to PENCIL POINTS if it had nothing but The Monograph Series. As it is I prefer PENCIL POINTS to all other magazines. I like details, pictures of good work, drawings and I hardly ever read text."

"PENCIL POINTS is the only architectural magazine to which I subscribe. I find it more acceptable than the others because it has adapted itself to changing times without stooping to some of the modern fads such as printing photographs with no title in plain view to tell you what it is."

(Continued on page 14)

COMBINING

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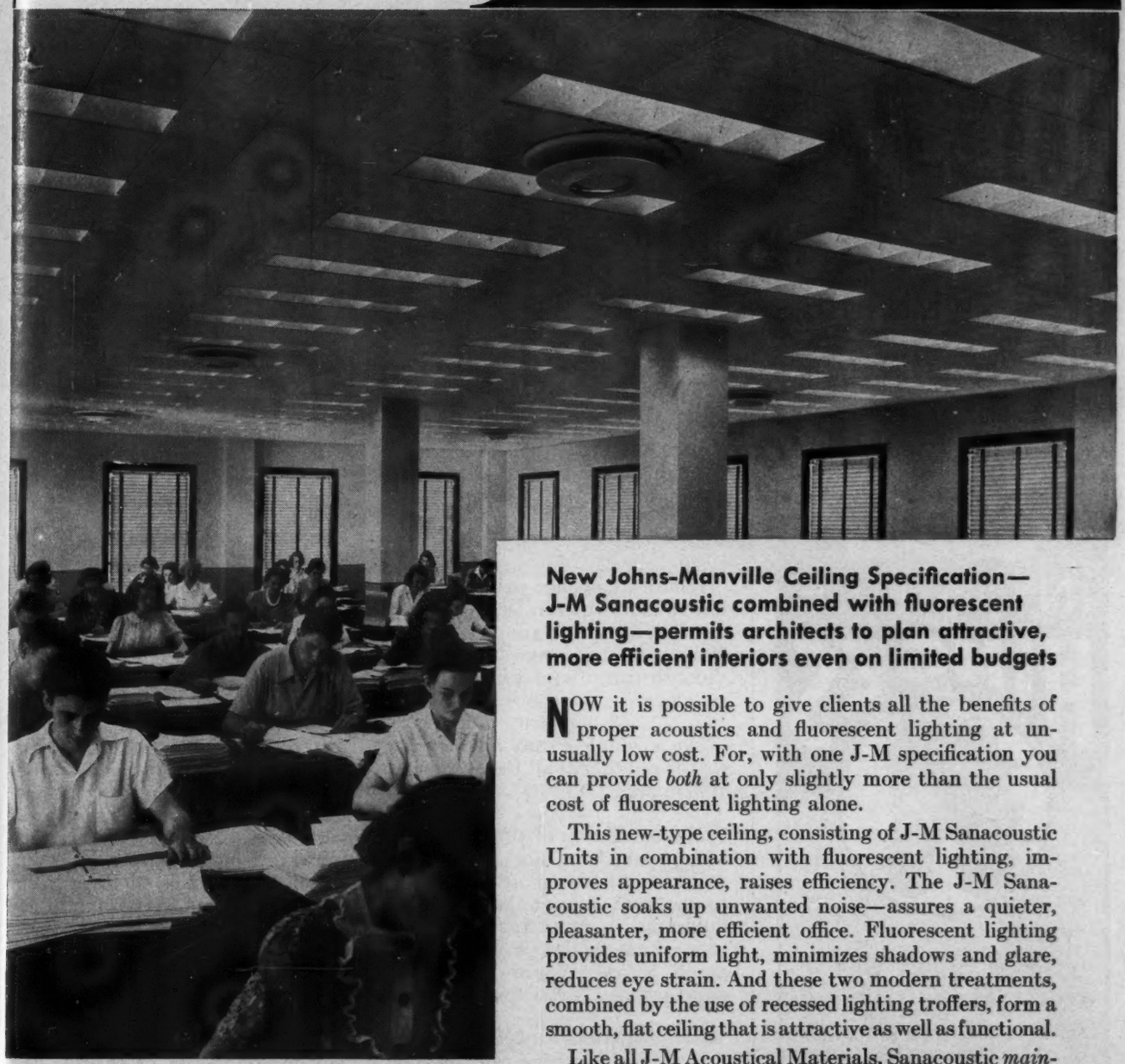

COMPLETELY MODERN is this office of A. C. Neilson & Co., Chicago, Ill. To assure quieter, more efficient offices and provide more uniform, glareless light, J-M Sanacoustic in combination with fluorescent lighting was specified. *Architect:* Walton & Kegley, Evanston, Ill.

New Johns-Manville Ceiling Specification—J-M Sanacoustic combined with fluorescent lighting—permits architects to plan attractive, more efficient interiors even on limited budgets

NOW it is possible to give clients all the benefits of proper acoustics and fluorescent lighting at unusually low cost. For, with one J-M specification you can provide *both* at only slightly more than the usual cost of fluorescent lighting alone.

This new-type ceiling, consisting of J-M Sanacoustic Units in combination with fluorescent lighting, improves appearance, raises efficiency. The J-M Sanacoustic soaks up unwanted noise—assures a quieter, pleasanter, more efficient office. Fluorescent lighting provides uniform light, minimizes shadows and glare, reduces eye strain. And these two modern treatments, combined by the use of recessed lighting troffers, form a smooth, flat ceiling that is attractive as well as functional.

Like all J-M Acoustical Materials, Sanacoustic *maintains* its noise-quieting efficiency. Little upkeep is ever required. And when necessary, all materials can be salvaged and re-used. For details, write Johns-Manville, 22 E. 40th St., New York, N. Y.

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ULTRA MODERN DETAIL
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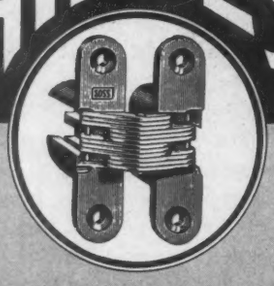

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(Continued from page 12)

"Since I am a young architect I would welcome the inclusion of works by younger men in practice to show the trends in comparison with the works of the older established offices."

"More photographs of good modern architecture and detail and less space to the New England series—which though nice is not necessary after the first viewing and rarely used for any inspiration."

"I particularly like your Selected Details with photos and detail drawings of residential features. I like your policy of not featuring stupendous projects which have little value to the average struggling architect."

"The size of this questionnaire with relationship to the envelope presents an ideal Disregard of the Obvious."

"Why do you (and practically everyone else) send enclosures that have to be refolded usually in an awkward manner before they can be put in the accompanying envelope."

"Hamlin's language pains me—let's have a man who can write in everyday English . . . another thing—Why did you make this yellow sheet so damn hard to fold in the envelope."

"Give a complete story on anything that is published; all the Whys and Wherefores."

"The one section of your magazine which you have not asked comment upon; the most important, to me, and the one which really holds me in remitting year after year. That section is your Monograph Series. Would like to see more prints . . . less text."

"Congratulations are due PENCIL POINTS for reaching an all-time high in circulation, but first for the great improvement that has taken place in the past few years. Of all the architectural publications that come to the office PENCIL POINTS is the only one that is read in the favorite chair at home."

"Doggone it, you can think up more questions than an inquisitive six-year-old granddaughter, but I can answer yours easier than the puzzlers she profounds. Just keep PENCIL POINTS as it is."

"I should like to see more photographs and plans and perhaps less text."

"Please Mr. Hamlin, don't go soft. Every building can't be good."

"I would like more comments, data, or what have you on the various methods of operating architect's offices including standard forms found successful in various architect's offices for their practice . . . so that young architects like myself may take advantage of any advice that could be given."

"I like the philosophical approach to architectural problems and believe that Professor Hamlin's articles are particularly inspiring and helpful. I like to see examples of good architecture and good design regardless of type of building concerned. I am inclined to give the word 'good' a very wide interpretation leaving considerable latitude for the preference of the architect and the editor."

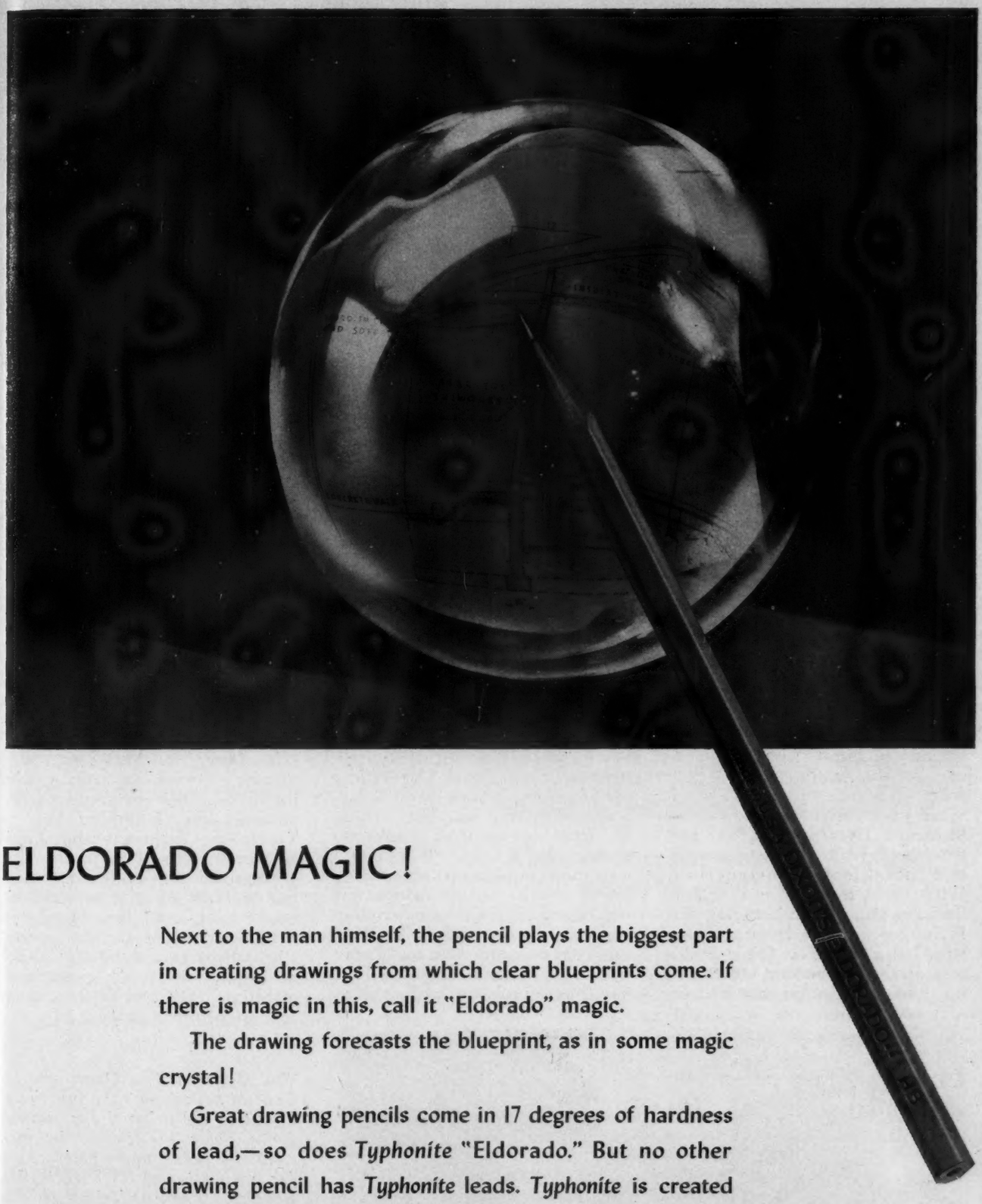
"I dropped my subscription to your old fashioned magazine some months ago, because I was tired of wading through the same old warmed dishes you present. Your 'increased circulation' I would say is due to a rise in income . . . rather than improvement in your magazine."

"I approve of the general conduct of PENCIL POINTS and choice of material presented, both in illustrations and in text, so that I am not expressing for or against individual features. There are certain departments, such as that of public work, in which I cannot enter and therefore discussion of these is not in my line; but who am I to say that this matter should not be presented in your magazine."

"Please keep PENCIL POINTS out of the real estate builder or 'see your name in print' class. Continue The Monograph Series. Continue the Don Graf kind of stuff."

"I think you know what kind of a publication you should print. You are doing O.K. Don't sell it down the river like the rest of them did."

"I take three architectural magazines: PENCIL POINTS is tops, absolutely tops. Make it cold and colder still to contractors, triple commission realtors and the ignorant banker (ignorant of the fine arts) . . . more power to PENCIL POINTS."



ELDORADO MAGIC!

Next to the man himself, the pencil plays the biggest part in creating drawings from which clear blueprints come. If there is magic in this, call it "Eldorado" magic.

The drawing forecasts the blueprint, as in some magic crystal!

Great drawing pencils come in 17 degrees of hardness of lead,—so does *Typhonite* "Eldorado." But no other drawing pencil has *Typhonite* leads. *Typhonite* is created in a literal whirlwind from natural graphite. There is no stopping the whirlwind and there is no stopping Dixon *Typhonite* "Eldorado" as it whirls along far in the lead.

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HERE, THERE, THIS & THAT

POTOMAC PATTER

"Double, double toil and trouble; Fire burn and cauldron bubble."

MACBETH, ACT IV, SCENE I

Let witches chant and good men rant but the ingredients necessary to make the architectural pot bring forth something better than dishwater soup is not to be. It isn't even a fine "kettle of fish." Nor a mess of stew. It's just a mess and no amount of witchcraft will stay the hand of disaster. The private practitioners hereabouts, and everywhere else for that matter, are seriously affected by the recent Supply Priorities and Allocations Board decision regarding the use of "critical" building materials for "non-essential" building. Whether this is good or bad, so far as this community is concerned, is beside the point. At present we are definitely incapable of housing our enlarged personnel, and many constructors are willing to risk future values on housing and business structures; *but,* they are tied hand and foot in any effort to build. Consequently the architect suffers. Oddly enough, this applies to some government agencies as well, for the SPAB has decreed that Post Offices, highways, river and harbor and flood control developments constitute non-defense construction. What happens now in Public Building Administration — regularly charged with the design and construction of our Post Office Buildings and other Federal structures, no doubt considered non-defense? With some three hundred architects on the staff, can enough defense jobs be obtained to provide employment for this large group? Its recently completed defense housing program was carried on in conjunction with other non-defense work. Now SPAB unhitches the rest of the load.

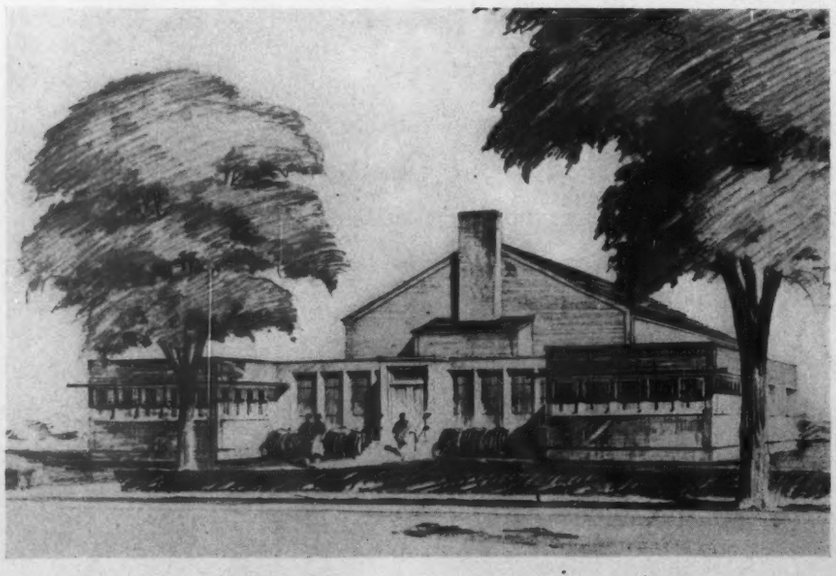
However, our information is that about $60,000,000 for needed auxiliary buildings at or around our Army camps is about to be allocated to PBA (Cheers); but it is not certain that all the drawings will be made by PBA (Uncheers). Private architects may be called in to help (Louder Cheers). This, however, may depend upon required speed, or to what extent the PBA is sabotaged.

Can it be that certain PBA "temporaries" were offered "permanent" jobs by other government agencies, and that in order to induce them to "stay put" counter-offers in the form of increased salaries were made? Could be. These lads, possessing the hidden asset of a Civil Service rating, can hardly be blamed for their advantageous position — AT THIS TIME. Of course, the gamble on which job will last longer is theirs.

We had the extreme pleasure of running across a couple of former Procurementers. *Lloyd Westbrook* recently returned from Connecticut where paying private practice apparently petered out, and *Alfred M. Marks,* down from Pittsburgh on business. The old "F" building was their unpleasant work place but I assure you gentlemen our new temporary emergency buildings are much better. At least, beaver board gave way to "Transite" or equal, and the steam lines have been provided with wheezeless, snoreless, and non-claptrap valves.

Without benefit of fanfare, prospectus, salesmanship, stocks, or bonds, a new architectural organization recently came into being. Paradoxically, architectural is and is not the proper adjective. For its membership is composed of architects, engineers, specification writers, mechanical engineers, building superintendents, landscapers, administrators, and clerks. In short, all members of at least five years standing in the old Office of the Supervising Architect were eligible to join. Since it is the group within, "architectural" cannot be denied. It was logical from more than one viewpoint to select the name of Old Settlers Association (OSA) for the organization. Its initials also apply to the Office of the Supervising Architect; the Old Settlers terminology is good because no permanent Civil Service employees were taken on since early 1931. Shortly thereafter the old and well-known OSA practically lost its identity when it was removed from the direct jurisdiction of the Treasury department. The Old Settlers have a very warm and personal feeling for what that OSA was and stood for. No man was ever held in higher esteem than the late *James A. Wetmore,* who, though a lawyer, was truly a guiding light for this government architectural unit. Following him as Supervising Architect came *Louis A. Simon,* who is at present the greatest character both as an architect and person ever to serve his government, and whose lifetime of work for the OSA and the present PBA will remain a constant source of inspiration to all government architects. The Old Settlers, as in-

(Continued on page 54)



The Office of The Quartermaster General has adapted the functional layout of the original Ely Jacques Kahn plans to develop its own standard plans and specifications for seven types of USO Recreation Centers. The majority of the buildings will be built from these standard plans. A few structures will be built from local plans prepared by architects residing near the sites of the projects. In some cases, existing buildings are to be purchased or rented, and alterations undertaken. And 240 units will be in full operation by Christmas! Six of the seven types are of frame construction, while the seventh is built of brick and steel.

RAMONA VILLAGE

(LOS ANGELES)

it's NATIONAL PIPE again...in one of the country's large housing projects

More than 100 tons of **NATIONAL PIPE** *installed in the 610 dwelling units of this new low-rent housing project.*

IT'S no accident that NATIONAL Steel Pipe has been chosen for a large majority of America's big scale housing projects. Architects and plumbing and heating contractors have long recognized the fact—that for general all-round building purposes, NATIONAL Steel Pipe gives the greatest service for the least investment. Owners can depend on the efficient, trouble-free operation of their piping systems when NATIONAL is on the job. Workmen tell us they like to work with NATIONAL Pipe because it's easy to install, profitable to use. It's clean, inside and out, strong and ductile, and uniform in every property. Bends, cuts and threads with ease.

NATIONAL quality never varies—NATIONAL Steel Pipe is always the same—no other pipe has been able to offer greater value in strength, durability and ease of installation at low cost. Write for data.

RAMONA VILLAGE HOUSING PROJECT CONTAINS 610 DWELLING UNITS... ONE OF THE COUNTRY'S FINEST!

Ramona Village is owned and operated by the Housing Authority of the city of Los Angeles, California. The 110 separate buildings are all two stories in height, and are of five different types, containing four, six and eight families each. The total number of rooms is 2679.

An administration building houses the administrative offices, maintenance shop, club and social room, and day nursery. The dwelling units contain from one to three bedrooms in addition to a living room and kitchen.

The architects for the work are known as the Housing Architects Associated, consisting of: George J. Adams, chief architect; Walter S. Davis, Ralph C. Flewelling, Eugene Weston, Jr., Lewis Eugene Wilson and Lloyd Wright. General contractor, Baruch Corporation. Mechanical engineer, Ralph E. Phillips.

NATIONAL TUBE COMPANY

PITTSBURGH, PA.

Columbia Steel Company, San Francisco, *Pacific Coast Distributors* — United States Steel Export Company, New York

UNITED STATES STEEL

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MONTGOMERY "CROSS-OVER" BRIDGES are designed and built to make possible the faster handling and speeding up of production demanded today by industry. These BRIDGES are used to save time in plants with loading docks separated by railway tracks. They replace cumbersome drawbridges and transfer cars which delay traffic flow and waste many minutes in hauling operations.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen, and Specification Writers

Publications mentioned here are all 8½ x 11 unless otherwise noted, and will be sent free, except as indicated, upon request to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

OFFICE EQUIPMENT — Bulletin No. 33 from Wallace Supplies Mfg. Co., 1310 Diversey Parkway, Chicago, illustrates in color and describes its line of storage cabinets and chrome tubular furniture for the office, reception room, or home.

FENESTRA HOLORIB—Punched for filing in a ring binder is Catalog HOL-1 from the Holorib Division, Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit, Mich. In its 12 pages are illustrated Holorib insulated steel roofs, reinforcing forms, Sanacoustic roof units. Engineering data and cross section details are included.

PHOTOGRAPHIC SCREENS—A 48-page catalog, No. 39, on Da-Lite screens and photographic accessories, from Da-Lite Screen Co., Inc., 2723 N. Crawford Ave., Chicago, gives technical data on brightness characteristics, and charts giving figures on picture sizes obtained with various projection lenses. The catalog lists the various screens in the firm's line. New is the Electrol screen, a motor-driven, remotely controlled roll screen. A flick of the switch lowers the screen into correct operating position.

ILG UNIT HEATERS—A presentation of the advantages of unit heaters over radiators and steam coils for heating the "vital zone" where people work, shop, and play, is included in a 36-page catalog, No. 341, (A.I.A. File No. 30-D-11) from Ilg Electric Ventilating Co., 2850 N. Pulaski Road, Chicago. Features of the Ilg construction are fully illustrated and described. Helpful engineering data, including tables, illustrations pointing out the proper location of units in various types of buildings, piping diagrams, etc., are contained in this manual.

EMERGENCY LIGHTING — A four-page folder describes the new emergency light and power units for industrial use made by Electric Storage Battery Co., 19th St. and Allegheny Ave., Philadelphia, Pa.

TURBO-VACUUM COMPRESSORS—A.I.A. File No. 32-G. A 24-page catalog from The Trane Co., LaCrosse, Wis., presents schematic and blue-print type illustrations, as well as performance data on the construction and operating simplicity of its Turbo-Vacuum compressors for large air conditioning installations, and for industrial process work.

Also from the same firm is Bulletin DS361, A.I.A. File No. 32-G, on reciprocating compressors. Roughing-in dimensions, mechanical specifications, and capacity charts are included.

SHINGLE STAINS — A 3½ x 6 booklet from Samuel Cabot, Inc., 141 Milk St., Boston, Mass., on "Stained Houses," describes its bleaching oils, creosote shingle stains, weathering gray stains, and heavy-bodied shingle stains, and shows illustrations of homes in various parts of the country on which the firm's products were used.

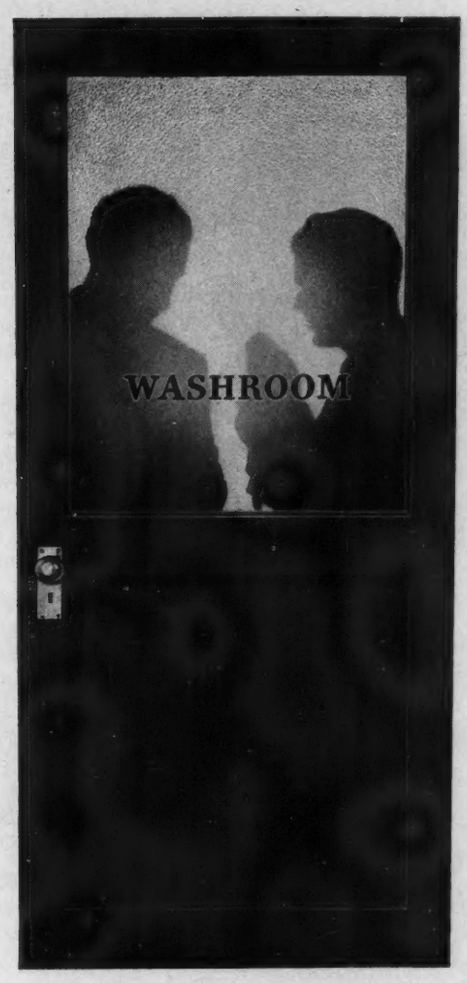
Also available are two 3½ x 6 color cards showing the standard shades of both creosote and heavy-bodied types of shingle stain and giving all general information pertaining to their characteristics, qualities, uses, application.

SCHOOL SEATING—"Truth on a Pedestal" is the title of a 16-page catalog on school seating recently issued by Welfare Engineering Co., 42 Madison St., Waukegan, Ill. Feature of the chair is the free interchangeability of seats, backs, top supports, and related structural parts.

Also available from the same firm: "Gimme A Chance," a 4-page folder on Utilitone, a movable pedestal school desk.

BALSAM-WOOL INSULATION —Charts, illustrations, and photographs illustrate the new 20-page Balsam-Wool catalog from the Wood Conversion Co., St. Paul, Minn. Three houses of varying size and design are analyzed for proof of insulation features of Balsam-Wood.

(Continued on page 48)



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when three out of four people voluntarily prefer any product you specify

THAT'S exactly the preference expressed for ScotTissue in recent building surveys. 75% of washroom users with a preference named ScotTissue their favorite. This means that *your* clients will appreciate your including this soft, absorbent toilet tissue in your washroom specifications.

And you'll be providing an economical service, for ScotTissue is packaged to be long-lasting. Scott Paper Company, Chester, Pa.

SEE OUR LISTING IN SWEET'S CATALOG

Trademark "ScotTissue" Reg. U. S. Pat. Off.
Copr., 1941, Scott Paper Co.

Office view of new addition to the Frederick Post Co. plant

That others may produce . . On Schedule

Defense begins on the drafting engineer's table. Before a plant can be built, he must plan it. Before a tank can be manned, he must see every tread and trigger on paper. He works *first*—quickly, so that others may produce On Schedule.

To the men who man the drafting rooms of industry, a larger plant and expanded manpower makes it possible for us to continue to service our customers quickly, and to ship On Schedule a great majority of their drafting room requirements.

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P.T.M. Pencil-tex POST MASTER REPRO VAPC

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 46)

BOILER TUBES—A 24-page condensed catalog, Bulletin TB-319, on seamless steel boiler tubes, alloy tubes, and pipe for refinery and process industries, stainless steel tubes and pipe, and seamless steel mechanical tubing, has been issued by Babcock & Wilcox Tube Co., Beaver Falls, Penna. The booklet describes, with photographic and schematic line diagrams, the seamless tube manufacturing process, has descriptions and applications of the firm's stainless steel tubes and pipe, and mechanical tubing.

UNIT HEATERS—A.I.A. File No. 30-C-4. Young Radiator Co., Racine, Wis., presents in this 16-page Catalog No. 2541 its line of Vertiflow unit heaters for industrial plants. Included are tables showing steam capacities for constant speed and variable speed motors, and for low temperature units. Typical wiring diagrams are also included.

STEEL FLOORING, GRATING—A four-page folder from Kerlow Steel Flooring Co., 232 Culver Ave., Jersey City, N. J., gives technical data on its flooring, grating, and safety steps for industrial applications. Specifications, safe load tables, and typical installations are included.

LIGHTING—A reprint from a paper presented at a joint meeting of the A.I.E.E. and the I.E.S. is available from Holophane Co., Inc., 342 Madison Ave., New York. This 12-page report, 6 x 9, titled "Protective Lighting for American Industry," discusses the proper method of lighting industrial plants and areas not only to facilitate production, storage, and shipping, but to protect property, material and facilities.

AIR CIRCULATOR—The Hearth-Aire Co., 3126 Scarborough Road, Cleveland, Ohio, has available an 18 x 31 chart which gives directions for installation of its Filt-Aire-Fan air circulator. The chart shows a number of variations possible in the installation of the unit.

Published by the same firm: 22 x 27 detailed sheet showing installation of Hearth-Aire-Place fireplace unit, together with adjoining construction details and chimney location diagrams.

(Continued on page 50)

DEPENDABLE HEAT

A Boiler a day for six days trucked to Col. John Warner and Harrison Homesites twin project of Peoria Housing Authority.

KEWANEE

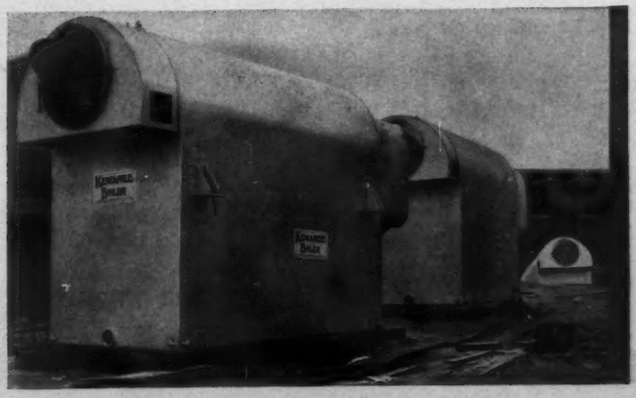
STEEL BOILERS

Doing the ground work at Harrison Homes with three of six Kewanee's "on the site." While for Col. John Warner Homes the three other 42,500 foot Kewanee's are already "going down" into the boiler room.

In many outstanding housing projects throughout the United States, Kewanee Boilers have been chosen to provide Heat.

Among such works in which Kewanee is proud to be represented are the pair of Housing Projects of Architect J. FLETCHER LANKTON pictured on this page.

The products illustrated herein are normally available for prompt delivery. Our ability to furnish these, as well as the products shown in our catalogues, is subject to the needs of the National Defense Program.



KEWANEE BOILER CORPORATION
KEWANEE, ILLINOIS
division American Radiator & Standard Sanitary Corporation

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 48)

OUTDOOR FIREPLACE DESIGNS—Eight designs for building an outdoor fireplace are contained in a 5½ x 8½, 24-page booklet from The Majestic Co., Huntington, Indiana. Although the booklet carries a published price of 25 cents, it will be mailed to readers upon receipt of 10 cents to cover mailing costs. Typical basic construction detail sections are given.

BUILDING PRODUCTS BULLETIN OF THE PRODUCERS' COUNCIL—Bulletin No. 40, issued by the Producers' Council, Inc., 122 E. 42nd St., New York, from which organization copies may be secured, contains information on building products and services of the following members:

American Lumber & Treating Co., 332 S. Michigan Ave., Chicago—The Wolmanized process of protecting lumber against decay and termites. (A.I.A. File No. 19-A-4).

Bell & Gossett Co., Morton Grove, Ill.—Zoned applications of the Monoflo system of forced water heat for apartment, commercial, and industrial buildings. (A.I.A. File No. 30-C).

Carrier Corp., Syracuse, N. Y.—Grille type outlets for air distribution. (A.I.A. File No. 30-J).

Crane Co., 836 S. Michigan Ave., Chicago, Ill.—Presenting the new Siwelclo and Delmar models of water closets, and the new Duraclay urinal trough. (A.I.A. File No. 29-H). Features of the one-pipe hot water heating system for small homes, available with a Crane No. 14 boiler, are outlined on a separate sheet. (A.I.A. File No. 30-C).

General Electric Co., Bridgeport, Conn. — Announcing a 36-page booklet on the selection of the right operating equipment (heating plants, wiring systems, and kitchen appliances) for residences.

Homasote Co., Trenton, N. J.—Analysis of the Homasote method of precision-built construction. (A.I.A. File No. 19-I).

National Fireproofing Corp., Pittsburgh, Pa.—Masonry wall construction with Natco Dri-Speedwall tile, with special emphasis on low cost industrial, commercial, and multiple housing construction use. (A.I.A. File No. 10-A).

Pullman Mfg. Co., Rochester, N. Y.—Low-cost window construction with Pullman balances. (A.I.A. File No. 27-A).

Richmond Screw Anchor Co., 820 Liberty Ave., Brooklyn, N. Y.—Use of Snap-Tys with spreader washers for monolithic architectural concrete walls. (A.I.A. File No. 4-D-3).

Sedgwick Machine Works, 151 W. 15th St., New York—Hand power dumb waiter equipment for general service. (A.I.A. File No. 33-D).

The Sisalkraft Co., 205 W. Wacker Drive, Chicago, Ill.—Applications of Sisalkraft reinforced, weatherproof building paper in building construction. (A.I.A. File No. 19-G).

The Stanley Works, New Britain, Conn.—A new and improved non-rising and free turning butt pin, which will not rise through the action of the door, is presented in a new folder. (A.I.A. File No. 27-B).

Vermont Marble Co., Proctor, Vermont—The use of marble for toilets and showers. (A.I.A. File No. 22-A-3F.

(Continued on page 52)

STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS

Women's Residence Hall, Depauw University, Greencastle, Ind. Designed and built by R. E. Schenck, Greencastle, Ind. Calked with Pecora by McFerran-Kane Company, Indianapolis, Ind.

SCHOOLS AND DORMITORIES

NEED PECORA WEATHER PROTECTION

Better scholastic work can be accomplished if students are protected from drafts and dampness. Longer building life, lower repair charges, smaller fuel bills, can be anticipated when moisture and dirt seepage through joints is prevented. Pecora Calking Compound has been specified and used in thousands of educational buildings since its introduction in 1908, because responsible architects and builders have realized the importance of sealing all exposed joints against weather. Experience has proved that Pecora is the ideal material for this purpose, for when properly applied, it will not crack, chip or dry out.

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NO. 8

ALUMINUM, DEFENSE, AND YOU

OCTOBER WAS A MILESTONE MONTH

There have been three other such milestones for civilian uses of aluminum during the past 18 months.

WHEN, ON MARCH 25, 1940, the price of Alcoa Aluminum ingot was reduced from 20c to 19c a pound, it automatically increased the number of civilian applications where using aluminum would be good cost arithmetic.

19¢

Every application carries its own special set of conditions. They determine how much you can pay to save a pound of weight, to get extra heat conductivity, or reflectivity, or what not. 19-cent ingot widened the circle of aluminum's usefulness.

AUGUST 1, 1940 WAS THE SECOND milestone. Economies growing out of greater volume of manufacture, and economies stemming from continuing research, brought the announcement of 18-cent ingot. The civilian manufacturer looking to his future could see, in the offing, more ways to use aluminum than ever before.

18¢

Perhaps you were one of the thousands who filed away in your book of futures the reminder that "when this thing is over, we must figure on using more Alcoa Aluminum."

THIRD MILESTONE showed up almost before you got that note made. November 18, 1940 saw another reduction on Alcoa Aluminum ingot to 17c a pound, making a total reduction of 15% in the midst of a general seller's market.

17¢

Defense got most of the immediate benefit, but the future of aluminum for you, and you, and you, was writ larger than ever.

THEN CAME 15c INGOT, effective Oct. 1, 1941, with accordant reductions in fabricated forms of Alcoa Aluminum. This means that the arithmetic of weight saving is all new, since last you figured on using this versatile metal in a civilian application. When the emergency is over, the fact is that all your old material cost comparisons will be as dead as a dodo.

15¢

THE ARITHMETIC IS NEW; but the fundamentals just get more so! More than ever, the strong alloys of Alcoa Aluminum are *the* answer to lightness with strength.

ALUMINUM COMPANY OF AMERICA

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 50)

KEWANEE BOILERS—Steel firebox boilers for coal, oil, gas, or stoker firing are described on five single-leaf circulars (A.I.A. File No. 30-C-1) which give in handy, compact form the specifications, tabulations, and diagrams of firebox boilers manufactured by Kewanee Boiler Corp., Kewanee, Ill.

DRAWING PENCILS — "The Right Pencil," a 3½ x 5½ booklet from Koh-I-Noor Pencil Co., Inc., 373 Fourth Ave., New York, describes the Koh-I-Noor line of drawing pencils, materials for drafting room use.

REDWOOD DETAILS — Four loose leaf sheets, punched for filing in a ring binder, are available from California Redwood Association, 405 Montgomery St., San Francisco, Calif. Each sheet gives pictorial and schematic details of various units built with the use of redwood. Included are Terraces and Raised Gardens, Retaining Walls, Lath House and Tool Shed, Garden Materials Storage and Compost Bin. Plans and material lists are included on each sheet.

WALL TILE HANDBOOK—Davidson Enamel Co., Clyde, Ohio, has available a 48-page, 5¼ x 8¼ wall tile handbook which describes the method of installing its Veos porcelain enamel on steel tile. Isometric views and line drawings illustrate various methods and styles of Veos application.

From the same firm: 12-page catalog on Veos porcelain enamel on steel tile, showing before and after views in various types of installations. Included are specifications, installation diagrams, and tile shapes available for all types of installation conditions.

LATH HANGERS — A.I.A. File No. 20-B-3. A single sheet insert, from V-W Co., 214 Oak St., Columbus, Ohio, gives specifications, technical data, drawings of its Nonail lath hanger for gypsum lath. The patented hangers are used for attaching gypsum lath to walls without nails.

UNIT HEATER—A.I.A. File No. 30-D-11, Catalog No. 5-E, from Grinnell Co., Providence, R. I., explains the principle of unit heating for all types of buildings, describes its wide range of applications. Tables give capacities of the firm's Thermolier unit, wiring diagrams. 56 pages.

Also available from the same firm: Catalog No. 9-D, A.I.A. File No. 30-C-21, on adjustable pipe hangers and supports; and Catalog No. 4, A.I.A. File No. 29-B, on cast iron, malleable, steel, and bronze pipe fittings.

FLOORING, ROOF DECKING—Southern Pine Association, Canal Building, New Orleans, La., has issued an 8-page catalog on Southern Pine heavy duty flooring and roof decking for industrial plants, warehouses, store buildings, etc. The catalog discusses moisture content, density, grades of factory flooring and roofing plank, laminated floors, waterproofing, other topics. A table gives insulating efficiencies of various types of flat roofs covered with built-up roofing. Included also are drawings of standard patterns for Southern Pine heavy duty flooring and roofing plank.

(Courtesy of the Rockefeller Plaza)

COVERED with ice through the cold winter — ground under whirling wheels of roller skates in spring and fall—scuffled by cafe traffic and dancing feet through the hot summer—that's how they punish this terrazzo floor at Sunken Plaza in Rockefeller Center. Such abuse does not destroy terrazzo's smooth, wear-resisting surface. Isn't this convincing proof that terrazzo needs no pampering and coddling, that terrazzo is a lifetime floor?

But that's not all! Terrazzo lets you design the exact floor that fits the surroundings. Not just a few colors—but any colors. Not just stock designs—but your designs. Hard wearing, long lifed, non-limiting—what more could you ask?

For full information on terrazzo, write for this A. I. A. Terrazzo Kit that tells how and where to use terrazzo. Sent *free* on request.

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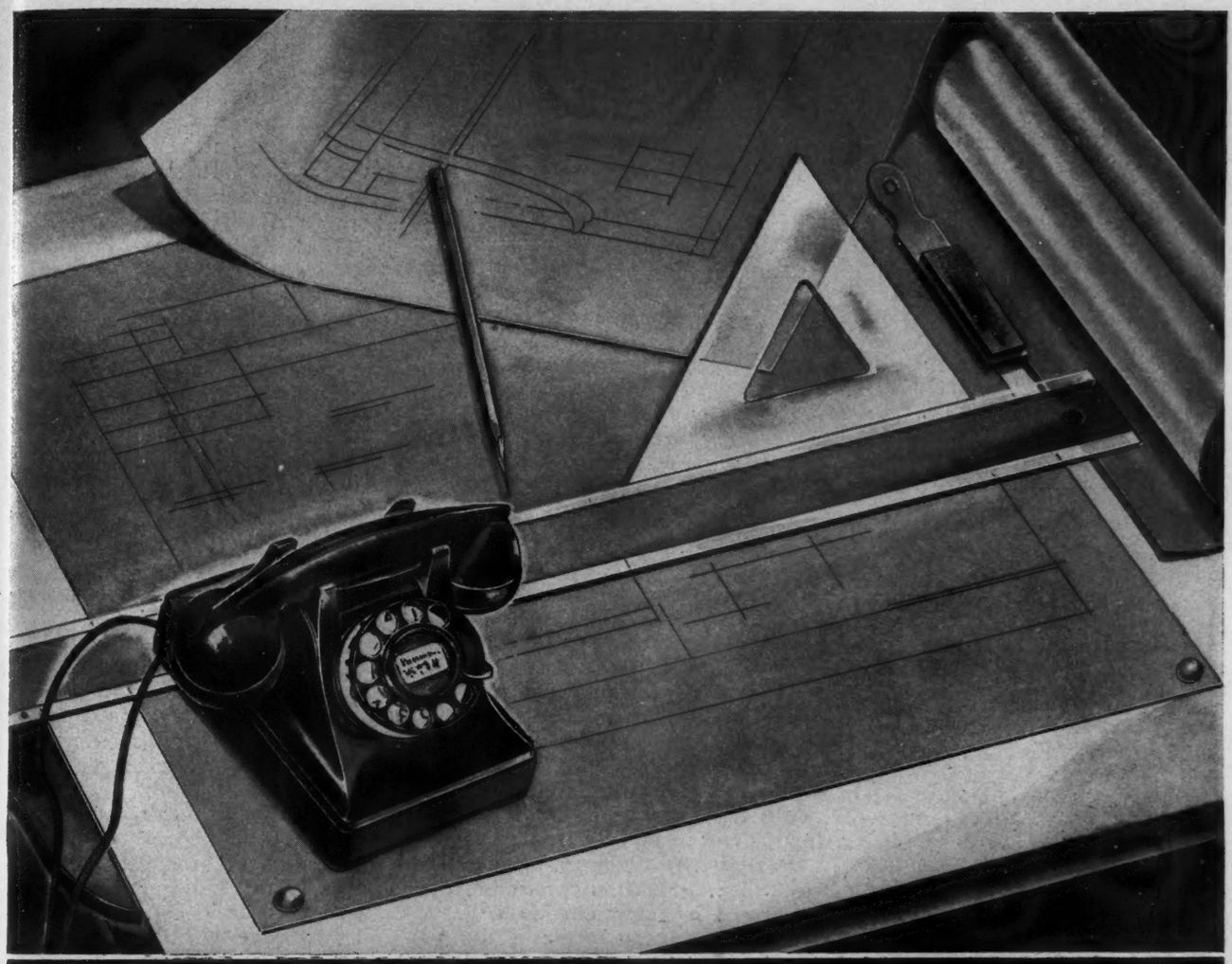

AN EARLY CALL...*may solve your insulation problem!*

THERE is no minimizing the fact that a "cork situation" exists. All of America's cork supply comes from war zones where shipping is uncertain. Available supplies are further limited because since June, Uncle Sam has been building up a stock pile of cork to assure an adequate reserve for defense needs.

Under the circumstances "Insulation business as usual" does not apply to corkboard. Defense needs come first and remaining supplies must be utilized as advantageously as possible. Temporarily, corkboard is not available for roof insulation and for some other uses not concerned with the preservation of perishable food products. But even on work in the perishable food field we have had to ask many old customers and friends to put up with delays and restrictions.

We know these delays can be costly and we are doing everything in our power to reduce them. But our efforts alone are not enough. We need your help too.

You can give us this help by letting us know *early* of your insulation needs. As soon as you begin to think about any insulated construction, protect yourself—pick up your telephone and call us.

Discuss your plans with our insulation specialist—while, or even before, drawings are prepared. He'll have time to offer suggestions which may avoid delays or costly changes later on . . . time to work out your problem in the most effective way. Working together, we will be able to either supply your cork insulation needs promptly, or help to solve your problem with engineering assistance or with suitable substitute materials.

CORK COVERING

Armstrong's Cork Covering is used largely in defense plants or in plants requiring refrigeration to protect perishable foodstuffs. Due to this fact and because the relatively small amount of cork used has not hindered the Government's cork reserve program we can meet most needs for cork covering.

Can we help you now? If so, please call our nearest office or distributor, or write Armstrong Cork Company, Building Materials Div., 919 Concord St. Lancaster, Pennsylvania.

ARMSTRONG CORK COMPANY
Insulation Headquarters

★ CORKBOARD ★ CORK COVERING ★ FIBERGLAS* ★ TEMLOK ★ INSULATING FIRE BRICK ★

*Reg. U. S. Pat. Off. O.-C. F. Corp.

(*Continued from page 40*)
dividuals, have felt for many years that in one form or another this association should be. So with final approbation the lads organized the entire office. In spite of the fullness afield, we sincerely hope that some of the old thought-of forms of clubs will become part of the Old Settlers program. We have in mind serious atelier work and a sketch class. *Charles Mason* was elected governor; *George Maddocks,* secretary. *Jacques Abadie* holds the purse-strings, and *F. Warehouse Boettcher* runs the complaint department. Good luck, fellow OSA's. RED

FAECT CONVENTION

Since a large proportion of the membership of the *FAECT* (Federation of Architects, Engineers, Chemists, and Technicians) is employed in the defense industries, the union's recent convention in Detroit, Mich., was devoted to a number of conferences and panels on the subject of the technical man's contribution to national defense. A symposium on the subject of defense production was part of the convention program.

TEXAS CONVENTION

The recently-concluded convention of the Texas Society of Architects was a successful and enthusiastic one, with well-attended meetings, an excellent program, and an effective and intriguing display on a series of panels of architectural exhibits. Discussed were such topics as architects and public works, legislation, education of architects, non-defense contracts during the emergency, other pertinent subjects.

New officers elected were *Wiley G. Clarkson,* Fort Worth, President; *Milton McGinty,* Houston, Vice-President; *Florian Kleinschmidt,* Lubbock, Director; *Bartlett Cocke,* San Antonio, Director; *David Baer,* Austin, Junior Director. Chairman of the general convention committee was *Ralph Bryan,* assisted by the following committee chairmen: *John B. Danna, Thos. D. Broad, Arthur E. Thomas, Howard R. Meyer, John D. Carsey, Everett V. Welch, Vernon E. Shanklin, Maurice Peterman, Roy E. Lane, Herbert M. Tatum.*

ARCHITECTS DISCUSS DEFENSE PROBLEMS

The defense program was the theme of the fourteenth annual convention of the State Association of California Architects, held in Hollywood, Calif., October 9 to 11. Discussions centered about defense projects.

Col. Edwin C. Kelton, U.S.A., discussed airport design. He did not hold out much hope for the architect in private practice to obtain airport design work because of the standardized procedure developed by Army engineers.

The Northern Section of the Association reported that through its paid public relations counsel a great deal of publicity had been received in connection with the activity of the architects in the defense program. The Southern Section reported that its weekly radio program, "Voice of the Architects," had gained national prominence among the public and in the profession. Tangible results of the program were increased commissions to the architect through a more friendly attitude on the part of the public, and a better understanding of the architect's work.

George Moskovics, Promotion Manager of the Pacific Network of CBS, advised the convention to humanize its work and thus bring to the public the benefits of good architecture, sound building. *Allen Herrick,* of the Security-First National Bank, said that since financial institutions had a vital interest in better construction, they were willing to give the architect their fullest cooperation.

Officers elected to head the Association for the coming year are *Wayne S. Hertzka,* San Francisco, President; *Walter R. Hagedohm,* Los Angeles, Vice-President; *Rowland H. Crawford,* Beverly Hills, Secretary; *David H. Horn,* Fresno, Treasurer. General convention chairman was *Merrill W. Baird.*

SYRACUSE CONVENTION

Feature of the fourth annual convention of the New York State Association of Architects, held October 16 to 18 in Syracuse, N. Y., was an exhibition of the outstanding works of members of the association. Convention sessions discussed such pertinent topics as civilian protection, radio publicity, housing trends, specifications, priorities in the building industry, professional practice, cooperation

(*Continued on page 56*)

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Please send me without obligation, immediately, the Don Graf Data Sheets on TECO TERMITE SHIELDS.

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(*Continued from page 54*)

better architectural and engineering professions. Part of the convention proceedings was a forum on services and fees for architects. Chairman of the general convention committee was *L. C. Dillenback.*

A.D.I. CONVENTION

"Design in the National Emergency" was the theme of the national conference of the American Designers' Institute, held in New York, October 3 to 4. Prominent designers, OPM officials, and architects discussed such topics as modern training for the designer, design standards and specifications, civilian defense and the architectural designer. The relation of the designer to the national emergency was discussed from the point of view of the government, industry, and the retail trade.

Jan Juta, of the British Library of Information, discussed the effect the war had upon the creative imagination of British designers as it affected certain materials now controlled for war uses.

...to Assure INTACT APPLICATION

Accidental tears, rips or punctures during application can defeat the very purpose for which you specify building paper.

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CERAMIC EXHIBIT

A one-man exhibition of modern decorative techniques, in various mediums and techniques, was held recently by *Joep Nicolas,* distinguished Dutch ceramist and painter, at the Orrefors Galleries, New York. The exhibition included terra cotta panels, stained glass windows, examples of mural glass, tempera paintings, oil paintings, and Synresite paintings.

AVERY EXHIBITION

Seven monthly exhibitions will be held in the Avery Architectural Library of Columbia University, New York, during the current academic year. Construction for civilian defense in nations at war, the development of Latin-American architecture, trends in the design of commercial buildings, and contributions to American architectural styles will be some of the subjects scheduled for 1941-42.

JACOBS DESIGN

We regret that in the presentation last month of the various entries in the Mid-River Ventilation Building Competition, sponsored by the New York City Tunnel Authority, the name of *Robert Allan Jacobs,* who collaborated with *Ely Jacques Kahn* in the design of the latter's entry, was inadvertently omitted.

SANDERS TO OPACS

Morris Sanders, New York Architect and Industrial Designer, has been appointed Principal Business Specialist in Construction and Design to the Consumers' Durable Goods Section, Office of Price Administration and Civilian Supply, Washington, D. C.

In his government capacity, Mr. Sanders will be attached to the office of the chief of the section, *Dr. James Bogardus.* His work will be varied, but will be primarily concerned with alternate methods and materials in the field of consumer goods merchandise, with economy and smooth flow of production the first considerations.

KIMBROUGH MEDAL

Hon. Robert Moses, Commissioner of Parks, New York, was recently awarded the J. Lloyd Kimbrough Gold Medal for his achievements in removing the traffic bottlenecks in and around the City of New York. This medal, conceived in commemoration of the first president of the American Institute of Steel Construction, is awarded for outstanding contribution to the steel construction industry, was de-

(*Continued on page 58*)

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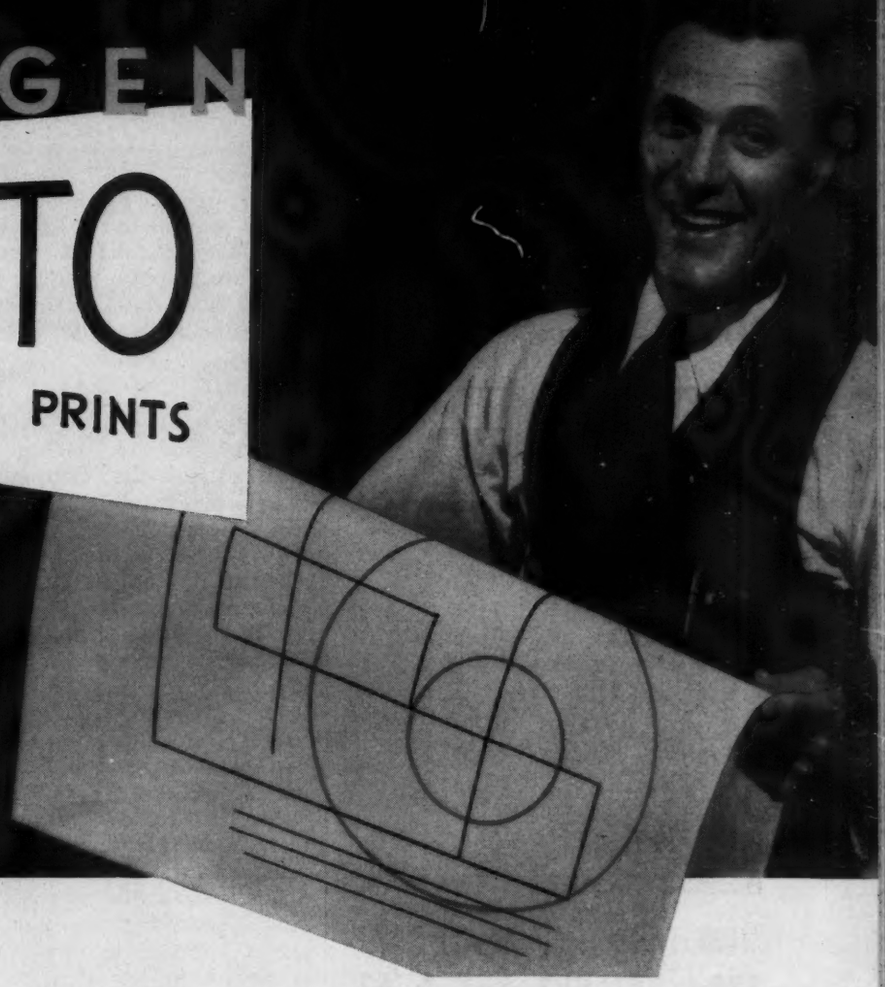

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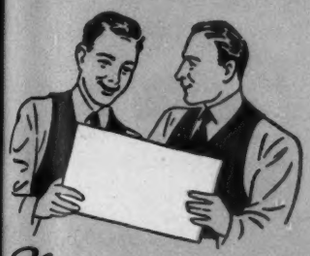

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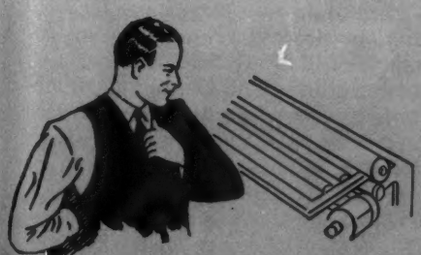

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(*Continued from page 56*)

signed by *R. Chambellan.* The award was made at the banquet held during the A.I.S.C. convention at White Sulphur Springs, Va., October 14 to 17, and is the first time the medal has ever been awarded.

ELMSLIE ASSOCIATES

In the article printed in the September issue on George Grant Elmslie and the Chicago Scene, there were included illustrations of two schools "done in association with *William S. Hutton,*" and the Sioux City Courthouse "of which William L. Steele and Purcell & Elmslie were associate architects." The accompanying text omitted to identify the two architects involved, beyond mentioning their names. Mr. Elmslie has requested us to add to the record the following information:

Mr. Hutton has practiced architecture in Hammond for many years. He was the architect for the School Board there during the period of years when the schools illustrated were built. When he was commissioned to do the schools shown he arranged with Mr. Elmslie, for whose work he had developed an admiration, to do the design. Although he graciously designated Mr. Elmslie as his associate, it should be clearly stated that the architect of record for the two schools was Mr. Hutton. Since then Mr. Hutton and Mr. Elmslie have become associated, with offices in Chicago.

William L. Steele, of Kimball, Steele and Sandham, Architects, of Omaha, Nebraska, has had a long and notable career in architecture and is a past Vice-President of the A.I.A. When the Sioux City Courthouse commission was awarded to him as architect he associated Purcell & Elmslie with him, thus renewing a working combination begun some years before when both he and Mr. Elmslie were employed in Louis Sullivan's office.

CERAMIC EXHIBITION

The 41st annual exhibition of the New York Society of Ceramic Arts, which opened on October 27th at the Barbizon-Plaza Art Galleries, New York, will run through November 20th. In addition to the usual extensive showing of pottery, the exhibition includes terra cotta and sculpture, tiles, glass, stained glass, enameled metals, other types of ceramic art. Special feature at the exhibition is a collection of ceramics for the garden and terrace.

WINSLOW AT R.P.I.

Professor *Ralph E. Winslow* has been named head of the Department of Architecture at Rensselaer Polytechnic Institute, Troy, N. Y., to succeed Prof. *Ralph Grady Culley,* who resigned to join the University of Florida faculty.

POST-WAR BUILDING

Post-war building activity exceeding in magnitude and importance the present defense construction program is predicted by *Dean Leopold Arnaud,* School of Architecture, Columbia University, in his recent annual report to the president of the University. Plans for rehabilitation must go forward with plans for defense, he stated, pointing out that without a well-planned and well-executed post-war program obsolescence will break down to deterioration of catastrophic proportions.

The architect has occupied a position of importance in the past, Dean Arnaud declared, but his position in the future wil be incalculably greater.

* * *

OBITUARIES

WAINWRIGHT PARISH

Wainwright Parish, a retired architect, formerly a member of the firm of Parish & Schroeder, New York, died on October 1 at his Gladstone, N. J. home, aged seventy-four. Soon after his graduation from Rensselaer Polytechnic Institute, Troy, N. Y., he supervised the construction of the railroad bridge across the Ausable Chasm in the Adirondacks. Later his firm supervised the erection of the West 57th St. Y.M.C.A. building, New York, which contained the longest steel truss up to that time.

GEORGE E. BULFORD, JR.

Stricken with a heart attack, *George E. Bulford, Jr.,* son of George E. Bulford, of Richards, McCarty & Bulford, Architects, Columbus, Ohio, died on August 20 at Ravenna, Ohio, aged forty-five. A graduate of Ohio State University, he worked at one time in the office of *Cass Gilbert,* New York, later returned to Columbus to his father's office. At the time of his death he was associate architect for the Jennings-Lawrence Co. on the U. S. Army Ordnance Depot Project near Ravenna, Ohio.

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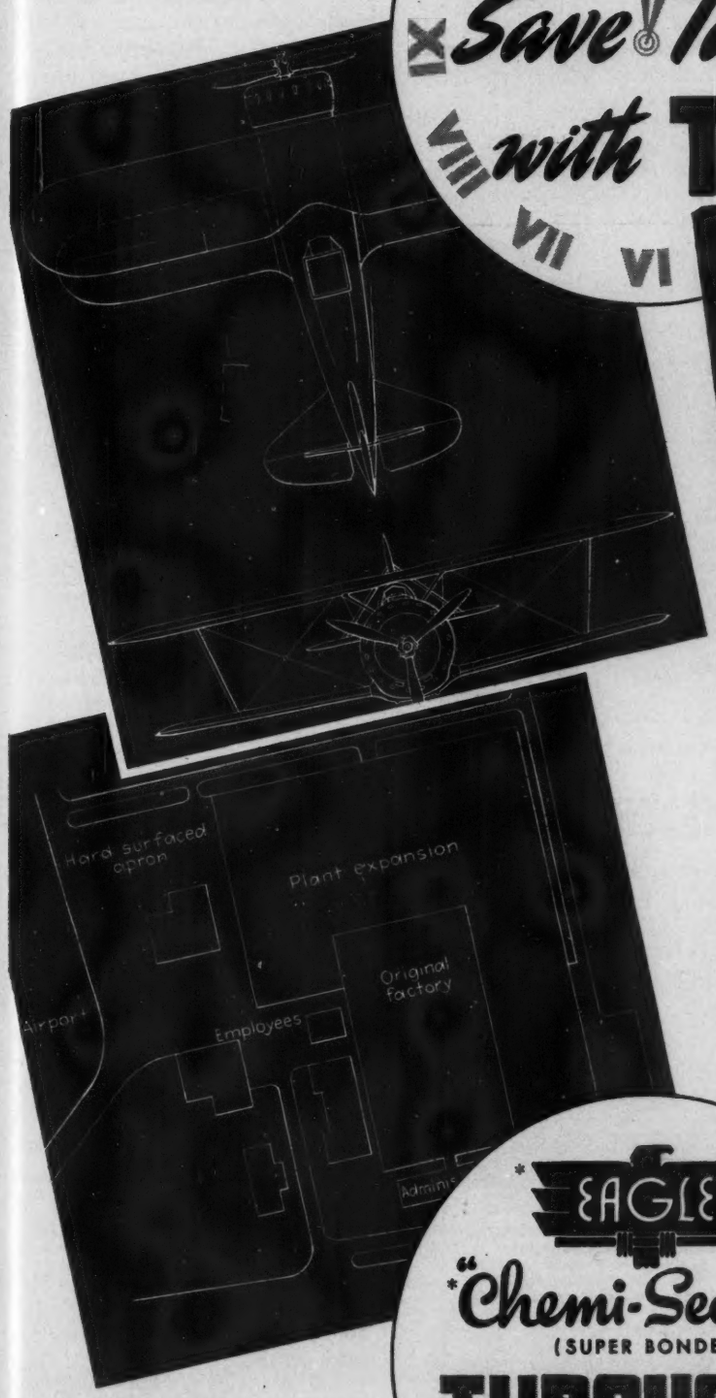

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MANUFACTURERS' DATA WANTED

LLOYD FINCH, *Architect,* C.P.R. Building, Portage and Main Streets, Winnipeg, Canada. (Data for complete A.I.A. file.)

JOHN C. PARKIN, *Student,* 534 Stradbrooke Ave., Winnipeg, Canada. (General literature, samples, and data for complete A.I.A. file.)

THOMSON AND BROWN, *Architects,* 508 Third Ave., Pittsburgh, Pa. (Data for complete A.I.A. file.)

ARCADIUS ZIELINSKI, *Architectural Draftsman,* 364 Grove St., Jersey City, N. J. (Data for complete A.I.A. file.)

H. B. HOLCOMB, *Drafting Instructor,* Mesa Union High School, Mesa, Arizona. (Data for complete A.I.A. file for use in the architectural drafting department of the school.)

PAUL VIRK, *Student and Junior Draftsman,* 50-48—42nd St., Long Island City, N. Y. (Samples of architectural materials, and data for complete A.I.A. file.)

GORDON M. CARLSON, *Junior Architect,* 52 W. 112th St., Chicago, Ill. (Data for complete A.I.A. file.)

E. M. CONOVER, *Director,* Interdenominational Bureau of Architecture, Home Missions Council of North America, 297 Fourth Ave., New York,—a consulting agency for the American Protestant Churches. (Data on materials and equipment that have been found, after testing in use, suitable for church work.)

JAMES S. SHATTUCK, R.A., *Architect,* 100 State St., Albany, N. Y. (Data for complete A.I.A. file.)

JAMES W. MANCUSO, *Architect,* 239 Van Dyke Place, Long Branch, N. J. (Data for complete A.I.A. file.)

WILBUR HENRY ADAMS, *Architect,* 114 W. Seventh St., Erie, Pa. (Data for complete A.I.A. file.)

KARL DeGROOTE, *Chief Draftsman,* Metropolitan Life Insurance Co. Parkchester Development, 67 Metropolitan Oval, New York, N. Y. (Data for complete A.I.A. file.)

J. L. DUNN, Home Planning Department, Wm. Cameron & Co. Inc., Waco, Texas. (Samples and data for complete A.I.A. file.)

EDWIN BURNS MIMS, *Architect,* Box 335, Reidsville, N. C. (Data for complete A.I.A. file.)

Bradley Washfountain installation at Norton Co. plant, Worcester, Mass.

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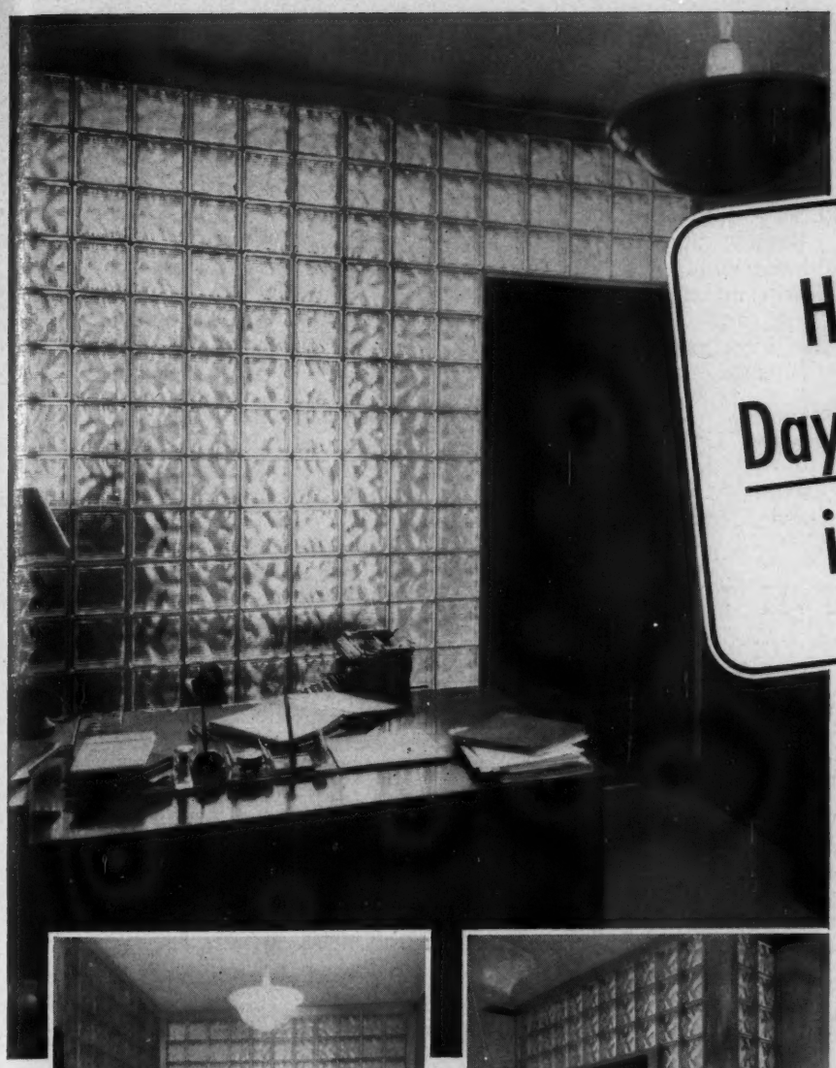
PERSONALS

HENRY MORGAN STEDMAN, *Architect,* has opened an office for the practice of architecture at 535 Ramona St., Palo Alto, Calif.

ALFRED KASTNER and THOMAS HIBBEN have associated themselves for the practice or architecture and engineering at 1621 Connecticut Ave. N. W., Washington, D. C. They have been commissioned by the Government to do some experimental work in earth block and fireproof slab construction in Alexandria, Va.

ANN GOULD, daughter of the late Carl F. Gould, founder of the Department of Architecture at

(*Continued on page 64*)



SMART GOOD LOOKS characterize this panel of PC Glass Blocks in one of the Wheeler Kelly Hagny Building suites. But the panel not only pleases the eye. It also brings "borrowed light" into the office to make seeing easier, the room brighter. It is a privacy-preserver of the best type. And it helps to make the room quieter, because of the high insulation value of the blocks.

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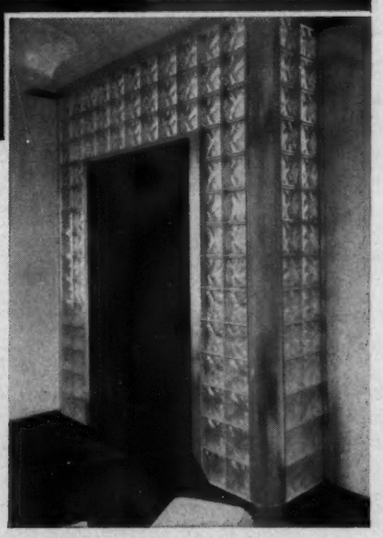

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(Continued from page 60)

the University of Washington, has turned her office in the Skinner Building, Seattle, Wash., over to her partner, Janet MacDonald. Miss Gould, an interior designer, and a junior member of the Washington State Chapter, A.I.A., was married several months ago to John Henry Hauberg, Jr., who is associated with the Weyerhaeuser interests.

JAMES W. MANCUSO, *Architect,* has opened an office for the practice of architecture at his home, 239 Van Dyke Place, Long Branch, N. J.

ADOLPH MERTIN, *Architect,* has moved his offices from 34 West 28th St., New York, to 101 Park Ave.

DANIEL PERRY, *Architect,* has temporarily moved his office from Port Jefferson, N. Y., to "Stonhenge," Bainbridge, N. Y.

EDWIN BURNS MIMS has opened an office for the practice of architecture in Reidsville, N. C.

H. L. LOGAN, Managing Engineer of the Controlens Division, Holophane Co., New York, has accepted an invitation as Consultant to the Industrial Visual Commission of the Public Health Bureau of the American Optometric Association.

PETER S. THOMPSON and PHILIPS B. BROWN, *Registered Architects,* have announced their partnership, under the name of Thomson and Brown, to practice architecture at 508 Third Ave., Pittsburgh, Pa.

FREDERICK MORRIS WELLS and JOHN CARVEL MERRILL have moved their architectural office from 103 Park Ave. to 101 Park Ave., New York.

THE MART

BEATTY & BEATTY, *Landscape Architects,* 728 Seventeenth St., Washington, D. C., want to sell two large drafting boards.

ROSSEL EDWARD MITCHELL, *Architect,* 2630 Adams Mill Road, Washington, D. C., has a number of architectural books for sale at reduced prices. Books in the list include standard design sources for an architect's library.

G. PIERS BROOKFIELD, *Architect,* 10 W. 33rd St., New York, has available an excellent drafting room and private office for an additional tenant. Attractive rental.

D. A. PULONE, *Architect,* 249 Hamilton Ave., Trenton, N. J., will pay cash for a transit. State make, condition, price.

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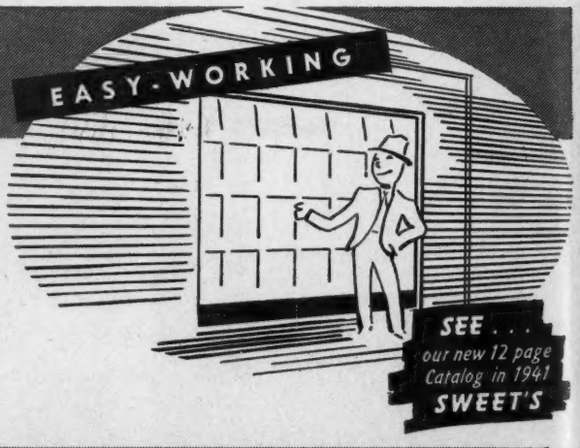

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FRANK LLOYD WRIGHT ON ARCHITECTURE, SELECTED WRITINGS 1894-1940, *Edited with an introduction by Frederick Gutheim (265 Pages plus the index—Duell, Sloan and Pearce Inc. 270 Madison Ave., New York, $3.50)*

Here in a Red Nine Square volume, that must be opened upon a desk if it is to be read with any comfort, are the chronological outbursts of *the* creative architectural mind: a mind with a theory of design that still wants full explanation; a theory that has been abused, criticized, prostituted, but never truly grasped. For fifty years Frank Lloyd Wright has endeavored to rescue architecture from the archaism of assorted eclectic inspiration. He has preached his own theory of an organic architecture whenever an occasion arose; in a *foreword* to a catalogue of Japanese prints, in a description of the scenic beauties of South Dakota, in criticisms of the published works of contemporary architects.

Students trained at "Taliesin" have gone into private practice but have not succeeded in erection of organic buildings in the true idiom of the master. Could these men have built with the stability of the Imperial Hotel, the spirit of "Falling Water," the utility of the Johnson Administration Building, the integration to the site of "Taliesin West," and the breadth of "Wingspread," then Broadacre City might be a reality. Wright is prepared to be "Architect to the Masses"; what a shame the cross section of Usonia's population has yet to reach that degree of culture which demands organic architecture.

The Wright platform lectures, editorials, and magazine articles as here collected in one volume, give but a facet of his genius.

We must wait for two promised publications from Duell, Sloan & Pearce, *"An Autobiography,"* and Henry-Russell Hitchcock's *"In the Nature of Materials, The Buildings of Frank Lloyd Wright,"* for the fuller appraisal of his Architecture. Unfortunately we must admit a timelessness in many of these writings, for American Architecture has progressed little since his first writings. This book is the most valuable publication about Wright since the January, 1938, *Architectural Forum.* JOHN C. SEWARD

MEDIAEVAL MONUMENTS AT THE CLOISTERS, AS THEY WERE AND AS THEY ARE—*prose story by James J. Rorimer, photographic story by Lincoln, Laura Schnarendorf, Milla, et al. Pages of prose 15, Plates XXVIII. $2.50. For the Metropolitan Museum of Art, by The Plantin Press, N. Y.*

It's good at the present time to have this book. One again realizes the quality of survival possible—that these are *things* that have lasted through the pillage and fires of a thousand years. Cloisters and chapels, doorways and images are shown as the photographer saw them in the Old World; as we see them today reset by American enterprise in the comparative safety of a Hudson River bluff.

The author, James J. Rorimer, is the devoted curator and one of those whose careful planning produced the present building known as The Cloisters, an appropriate, unified ensemble of diverse architectural elements. The problem en-

(Continued on page 70)

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(*Continued from page 66*)
tailed incorporating functionally and in uncluttered simplicity the Chapter House from Pontaut, the stonework of the choir of the church at Langon, parts of the cloisters of five French monasteries (*Saint-Michel-de-Cuxa, Saint-Guilhem-de-Désert, Bonnefont-en-Comminges, Trie,* and *Froville*), some thirty doorways and windows, and various stained-glass panels. These examples of Romanesque and Gothic architecture and architectural details, together with tapestries, sculpture, furniture, and metal-work, are shown now in unconfused surroundings.

Under such authoritative guidance it is a privilege to examine each item. The Langon choir, for instance, will have fresh interest for readers who have followed its history through service as a stable, a meeting place for the Jacobins during the French Revolution, a dance hall, a moving-picture theater, a government storehouse for tobacco, and a return to dignity at The Cloisters.

Here is a rare book for the front office—if its owner can bear to expose it to thumbprints!

DOUGLAS M. GAME

THE INTENT OF THE ARTIST, *by Augusto Centeno ($2.50, 162 pages — Princeton University Press, Princeton, New Jersey).*

"In this momentous crisis of occidental civilization," writes *Augusto Centeno,* "great care must be taken —culture could become a Maginot Line." This warning metaphor climaxes the introduction to a highly provocative little volume. While defining the title as one of the three dimensions—intent, extent, content—which characterize a work of art, Mr. Centeno cautions against the rigid, outward forms which, unless critically evaluated, might stamp our generation. His introduction supplies an excellent theoretical basis for the artistic criticism he deems so necessary. Beyond that, it is a chatty, general discussion about art and artists, threaded with references to the historical great, tactfully interwoven with quotations by the late *Sherwood Anderson, Thornton Wilder, Roger Sessions,* and *William Lescaze,* each of whom has contributed an essay to the body of the book.

Here the work loses its general nature, and becomes essentially a series of autobiographical outlines of specific intent; there is less about art, much of the artist himself, which, however, will be quite revealing to those already acquainted with these outstanding men. It is worth noting not only that an architect has been included in this group but also that, of the four essays, Mr. Lescaze's is certainly the *most enlightening* for the layman.

Is it Architecture, or is it Art itself, that is coming into its own? I look forward to the time when the Industrial Designer, the Scientist, and the Mathematician will be included in the hierarchy of those who may express opinions on art.

ROBERT HENRI MUTRUX

"I think he's walking out with the plans of our three industrial jobs under that beard."

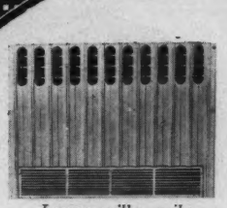
BETTER HOMES FOR BUDGETEERS, *Sketches and plans by Royal Barry Wills (102 Pages Illustrated, $3.00—Architectural Book Publishing Co., Inc., 112 West 46th St., New York)*

The public has come to know Mr. Wills as the leading architect of small modern houses which appear to be inspired by New England colonial. For the present discussion Mr. Wills has established a basic minimum plan, with an itemized cost sheet which totals $3380. This plan is then expanded, a unit at a time with its cost increasing, until a relatively luxurious house is achieved.

A six-page section is devoted to "Dollar Savers." These sketches from his own notebooks of salient points where simplified construction can save money will appeal to the home builder. This is followed by analysis of a minimum specification.

The bulk of the book is devoted to delightful perspectives in charcoal and Chinese white on green paper of seventy-five houses designed by Mr. Wills and his staff, for publication. Each perspective has its plan at 1/16″ scale and a short discussion of its outstanding qualities. These houses are grouped within three definite income brackets. Fortunately Mr. Wills is not selling out the profession in this volume, for the drawings stimulate interest in homes designed by an architect rather than offering plans from which to build. The plans have many good elements though generally lack the study that made Mr. Wills' LIFE House so successful and popular.

This is a book for home owner, realtor-builder and small house architect. There is merit in its discussion of costs and its well-considered expression of New England vernacular in architecture. J.C.S.



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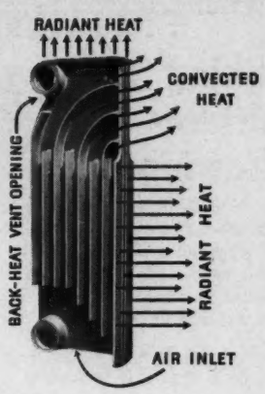

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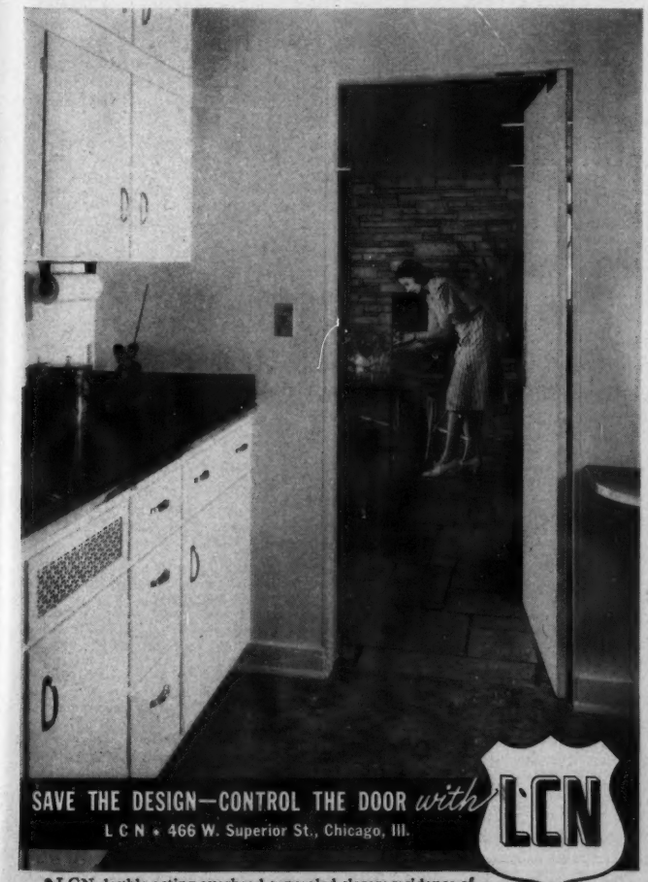

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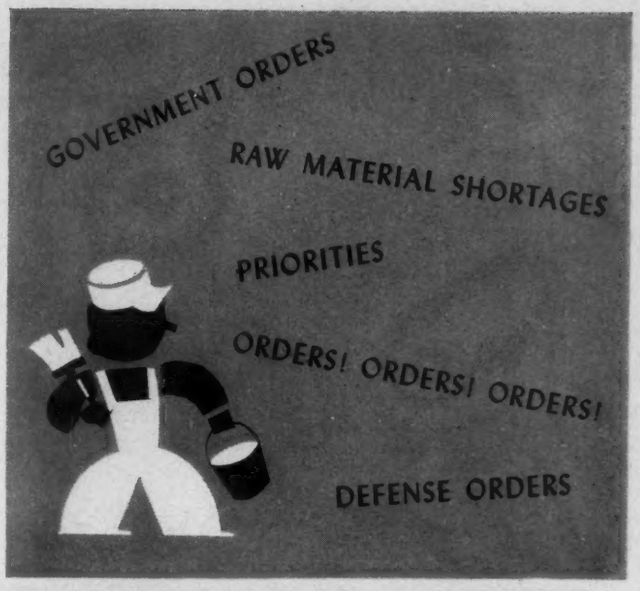

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State of New York } ss.
County of New York }

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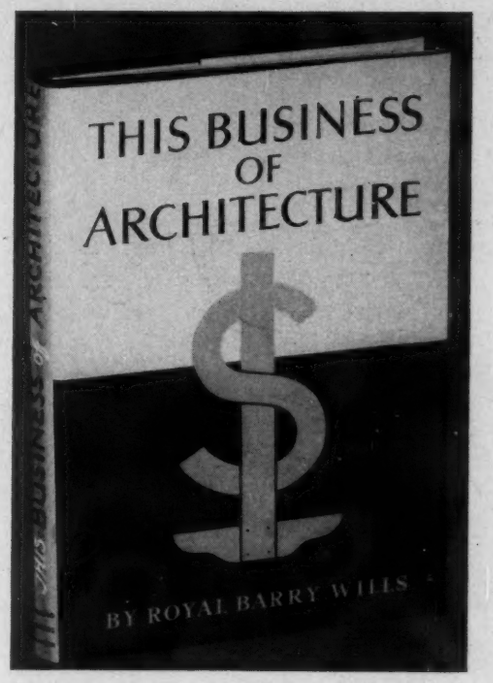

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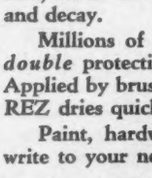

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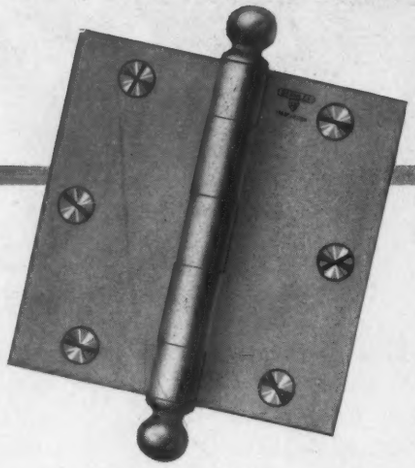

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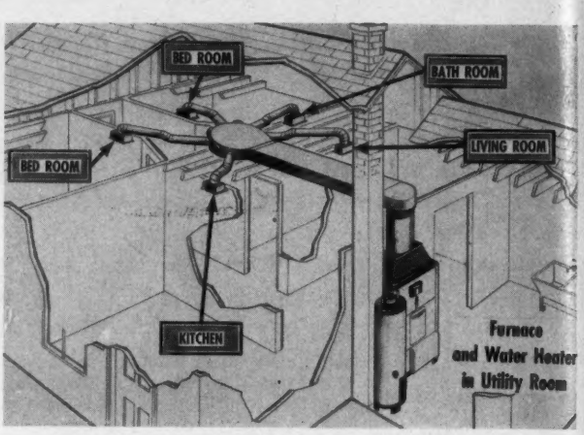

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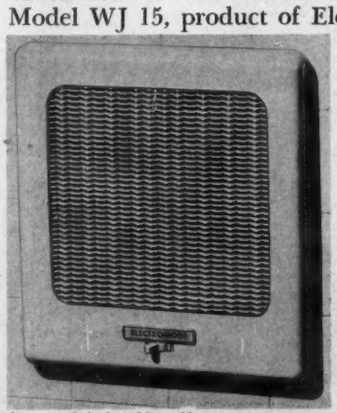

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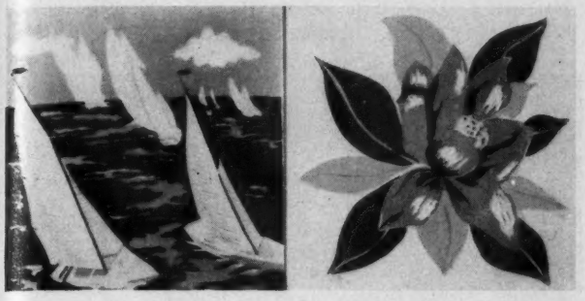

glazed colors, the tiles may be used in various types of buildings. All stock tiles are 6 x 6 inches. Exclusive designs can be produced in 6 x 6, or 4¼x4¼ inch tiles up to and including five colors, in minimum quantities of 500 of a single design. Surface finish is permanent, easily washed, and impervious to heat, cold, alcohol, acids, stains, and weather conditions. Two of the twelve stock designs are shown. At left is the Sailboats tile, available in cobalt blue, dark blue, pale coral, and white; at right is the Lily pattern, which comes in blue green, chartreuse, yellow, deep pink, and gray on white background.

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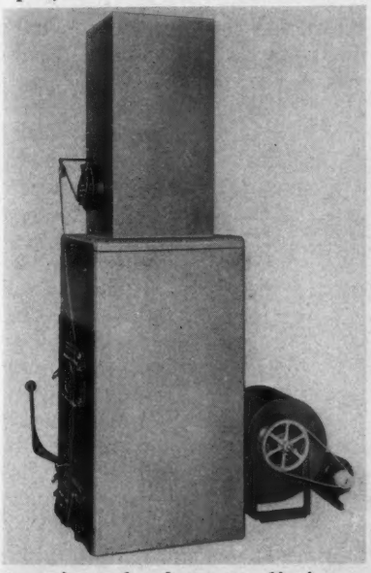

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(Continued on page 80)

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(Continued from page 79)

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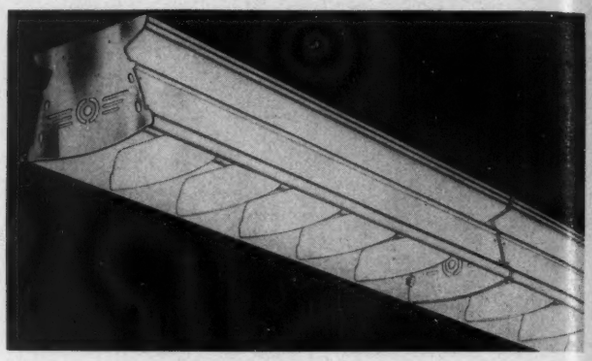
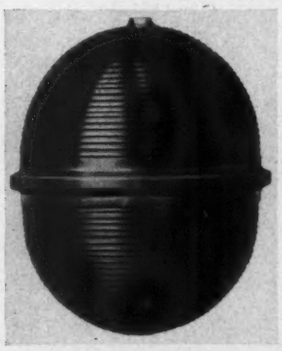


for single unit installations as well as for long continuous runs. The troffer is available for one and two 48-inch, 40-watt lamps parallel, and for one 60-inch, 100-watt lamp. The louvers are removable. Fixture-body and louvers are finished in baked Super-White enamel. Lamps are easily removed through the side opening without disturbing louvers, and the units are designed for easy installation and servicing. From Day-Brite Lighting, Inc., 5411 Bulwer Ave., St. Louis, Mo.

PLASTIC CLOSET TANK FLOAT

Priorities do not affect the production of a new Tenite closet tank float now being made by American Molded Products Corp., 1753 N. Honore St., Chicago, Ill. The float is said not to dent, crack, or break under usual handling or packing with tools, or in installation, repair, closet-cleaning. It is impervious to water and leak-proof. The two perfectly-fitted sections are Tenite-welded. The float is oval in shape, the standard 4 x 4 x 5 inches for use with equipment in the largest range of tanks. The float is non-corrosive, has a permanent glossy black finish, weighs 3.9 ounces.



EMERGENCY LIGHT AND POWER UNIT

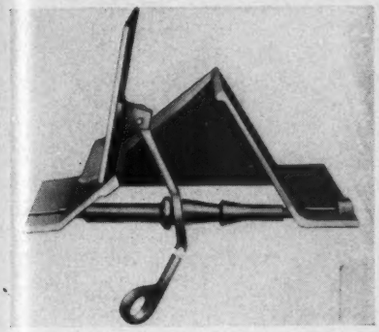
Meeting the increased need created by national defense activities for emergency light and power protection, the Electric Storage Battery Co., 19th St. and Allegheny Ave., Philadelphia, Pa., has announced four new Exide emergency light and power units for industrial use. Each unit is used with an Exide battery of either the chloride or the flat plate type, has an automatic transfer switch which instantly transfers the battery to the emergency lighting circuit upon failure of the normal A.C. supply. When the A.C. service is restored the emergency lighting circuits are instantly transferred back to the A.C. supply.

The battery is kept fully charged at all times, because after normal power is restored the battery is

automatically placed on high rate charge. As soon as recharging is complete, the high rate is cut off and a rectifier then supplies a low rate of charge, enough to maintain the battery in a fully-charged condition. The new units may be had in capacities from 3,400 to 10,000 watts. Other systems are available in capacities ranging from 240 to 100,000 watts.

NEW DAMPER CONTROL

Feature of this improvement in fireplace damper construction is an ingeniously-designed poker control mechanism which makes for easier operation. The operating lever has a circular opening which enables it to move freely over a horizontal bar designed with two stops. The operating arm requires little effort to work. To facilitate installation and to assure an effective smoke-shelf, the damper also incorporates an extra-wide back ledge and built-on lintel.



The body of the unit is of cast semi-steel; the damper valve of heavy gage steel plate.

The new model, known as the Standard, is built in all popular sizes. More detailed information may be had from The Majestic Co., Huntington, Indiana.

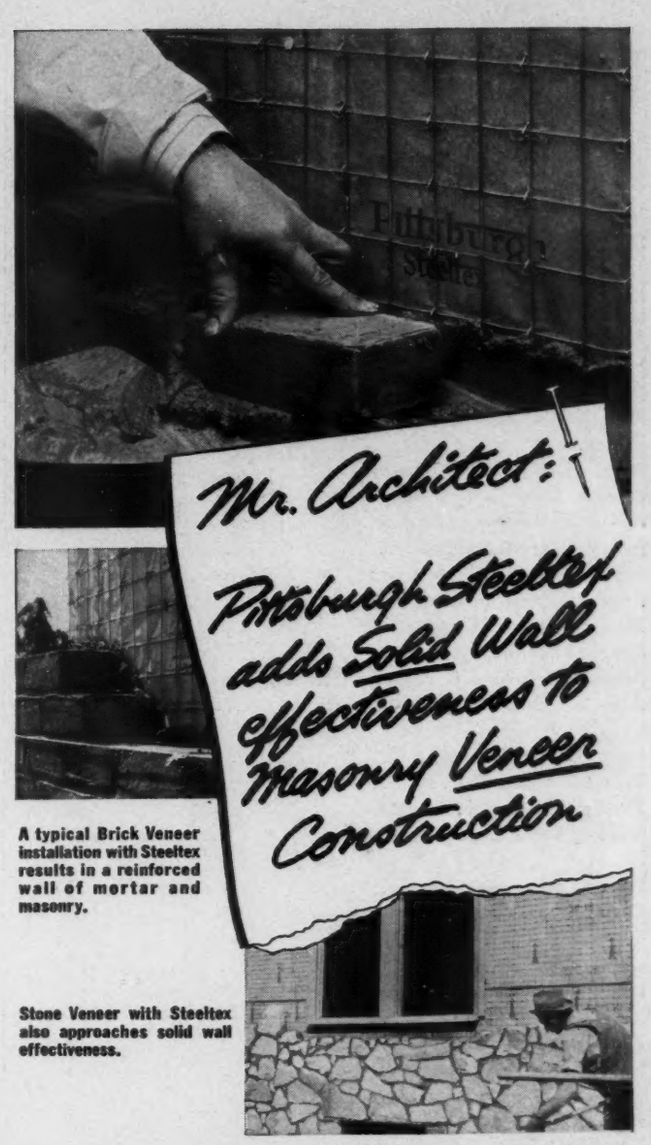
ODOR ABSORBING EQUIPMENT

A new Type A odor absorber, especially designed for homes, doctors' offices, small shops, reception and dressing rooms, etc., which will rid 100 cubic feet of air per minute of odors and gases, has been announced by the Dorex Division, W. B. Connor Engineering Corp., 114 E. 32nd St., New York. The new unit comes in an enameled metal case, can be used as a portable or stationary model, has a 40-watt motor, circulating fan, a dust filter, and four carbon-filled canisters. The carbon, when saturated, can be reactivated and used over and over again.

GARBAGE INCINERATOR

A popular-priced domestic garbage incinerator and rubbish burner, fired by gas, has been announced by Kohn Mfg. Co., Milwaukee, Wis. It has a capacity of 1½ bushels, adequate for the needs of the average home. The incinerator embodies new features of safety, economical operation, convenience. Overall diameter is 19 inches; height is 33½ inches. Castings are of heat-resisting grey iron. (The incinerator, under test, has reduced 150 pounds of sliced raw potatoes to 3½ pounds of ash. This ash is usable as a garden fertilizer). An automatic shut-off for the unit is available at a slight additional cost.

The incinerator is sold through the Equipment Service Co., 154 E. Erie St., Chicago, Ill., from which firm further details may be had on the new incinerator and other models in the Kohn line.



A typical Brick Veneer installation with Steeltex results in a reinforced wall of mortar and masonry.

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It imparts to veneer most of the advantages of *solid* wall construction, yet eliminates the old faults of excessive thickness, prohibitive cost, dampness, sweating, etc. It applies the proved strengthening principles of *reinforced* concrete. *Steeltex* makes the brick, stone or other masonry veneer wall an *integral* part of the structure—not a free-standing *shell* with limited strength and definite fire hazard. It adds an air and water repellent "moisture seal" backing that provides additional protection and enhances effectiveness of inner wall insulation. Every architect should have full particulars about this improved method of applying masonry veneer. Write today.

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PENCIL POINTS

ECEMBER
1941

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2 DAMPCOURSE AND APRON BEHIND BRICK VENEER
Adequate protection against moisture is always to be sought at this vulnerable point. Anaconda "Electro-Sheet" Copper provides just such protection because it is absolutely rustproof and will not dry rot, regardless of time.

3 DAMP-PROOFING FOR FOUNDATION WALL
Here "Electro-Sheet" provides a low-cost "metallic" answer to a common waterproofing problem. The photo shows how easily "Electro-Sheet," when suitably backed, can be handled. It's easy to install because it is almost as flexible as paper, yet highly resistant to kinking, breaking or tearing.

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"Electro-Sheet" Copper may not be used for building construction after Jan. 1, 1942, except as provided for under Conservation Order M-9-c, Paragraph B, amended Nov. 1, 1941. This unique product has found many defense applications, including damp-proofing defense and officers' quarters of both Army and Navy.

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The house shown here is in Central Islip, New York. The architect was Eugene Marten; the contractor, Harold McGowan. This "Electro-Sheet" is Copper-Armored Sisalkraft—made by The Sisalkraft Co., 205 West Wacker Drive, Chicago.

R. E. Anderson was the architect for this work in Wayne, Illinois. Herman Wendler was the contractor. This "Electro-Sheet" product is also Copper-Armored Sisalkraft.

PENCIL POINTS, published monthly by Reinhold Publishing Corporation at East Stroudsburg, Pa. Publication office, East Stroudsburg, Pa. Editorial and Advertising Offices, 330 West 42nd Street, New York, N. Y. Yearly subscription $3.00, single copies 50 cents. Entered as second class matter, July 8, 1941, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879. Volume XXII, No. 12, Dated December, 1941.

THE THRESHING FLOOR

We are indebted to R. PENLEIGH BOYD, *editor of "Smudges" and "Lines," both published by the Architectural Students' Society of the Royal Victorian Institute of Architects, Melbourne, Australia, for the following interesting (and, we hope, not prophetic) comments on professional conditions in wartime Australia.*

As you probably hear very little of the state of the profession in this country, I thought you might be interested in some of the main effects of the war on Australian architecture.

About a year ago (a year or so after war was declared) a large number of defense projects were started, and materials and labor were still being squandered in one of the biggest booms in private building this State (Victoria) had ever seen. City office buildings, flats, and houses were springing up like mushrooms. In order to conserve the commodities, the Federal Government introduced building restrictions, in lieu of rationing which was considered too awkward to handle. A limit of £5000 was fixed for any private building. This caused many a frown in the larger private practices, but nobody worried very much because many large buildings were still in hand, and there was a general confidence that most of the defense program would be handed over to the private offices.

Today, however, the frowns have deepened. Restrictions have been tightened to a limit of £3000 on domestic work, and an average of £300 (according to a sliding scale) on luxury building. Still the big offices would have little to worry them if defense work was forthcoming, but somehow it is not. In spite of many deputations by Institute Councils and Building Societies to Canberra, the defense factories and hospitals still pour onto the boards of the Government architectural departments, which have stretched overnight to fantastic proportions.

The question today among draftsmen who may meet is not, "Whose office are you in now?," but "which department"?

The smaller private offices are crumbling pathetically; the large offices are shrinking rapidly. Two only are left in Melbourne with over ten draftsmen — these almost exclusively engaged on hospital work. The larger of these, Stevenson & Turner, with about twenty-five draftsmen, is responsible for the new Melbourne Hospital, largest building in Australia.

Defense housing is almost ignored, as you may have gathered from SMUDGES; small house building is the one branch of the trade in which the Government does not wish to discourage private enterprise. Here, however, the speculative and designing builder firmly holds the reins, his houses being about as poor as is usual, I imagine, from his race of any nationality. As to design as a whole in Australia I think, judging from your country's magazines, the standards are very similar.

Where you apparently have great tracts of Colonial boxes in the poorer suburbs, we have a repellant type of ornate brick "moderne" villa; infinite variations on a most depressing theme. I suppose you can guess the type of thing? Hipped roof, horizontal striped brick and stucco, horizontal glazing bars. Ironically enough, the standard of architects' design was just beginning to rise quite high, and several really fine buildings had emerged, when the restrictions came in.

I hope I have not bored you with these very incomplete notes, and indeed I hope that the facts are not new to you, for I should hate to find that our overseas publicity is as bad as I am almost sure it is.

DECEMBER, 1941

Another year's-end rolls around; another Christmas day whereon to turn our thoughts for a moment from the harsh external world into a spiritual atmosphere of good cheer and "peace-on-earth"; another New Beginning as men of good will promise themselves and each other that things will grow better in the next twelve-month because they will strive together to make them so! Readers, we greet you in friendship and wish you all the joys that go with the season and the fulfillment of your hopes.

THE EDITORS

The real cause for slums lies in lack of proper advance planning and proper supervision in the growth of communities, points out GEORGE A. BOEHM, *A.I.A. New York Chapter.*

Generally, it is the belief that the chief cause for the slum is the so-called industrialization of society. Undoubtedly there are localities where the growth of the slum can be traced to industrialization. However, there were slums in Rome, also, when industrialization, as we know it, was in but slight evidence. The real cause for the slum lies elsewhere. That *elsewhere* is the lack of proper planning, in advance, and the failure to insist upon and direct the growth of communities under a clear conception of what the physical environment must be to allow for the living of a full and completely healthful life, physically as well as spiritually.

Planning concerns itself not only with isolated houses, individual plots, single streets, or even a single neighborhood. It is a problem of planning for whole communities. This planning is one uniquely for the architect.

C. GODFREY POGGI, *Chairman of the Professional Practice Committee, Union County (New Jersey) Society of Architects, points out "What Fools These Mortals Be."*

Now that private practice is again war blockaded, it would seem an opportune time to ponder the evil wrought by those responsible for the degradation of our profession whereby it has generally become a commercial racket and reduced many Architects to virtual penury.

This subject could well be dwelt upon at length, but due to lack of space it will here be confined to but one phase of the result of the abandonment of true ethical practice as originally set up by the A.I.A.

The FHA, for example, has loaned, since its inception, a total of $2,535,000,000 in 556,000 mortgages. Had the Architects adhered to first principles they would have reaped, at the rate of 6%, a total of $15,000,000, whereas they only performed partial service and derived the comparatively small sum of approximately $2,500,000, or a 1% fee, and lost $12,500,000.

(Continued on page 10)

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ALLEN R. KRAMER, *a student at Cornell University, has been a regular contributor to the "Critical Youth" forum conducted in* PENCIL POINTS.

The problem of education is undoubtedly one of the most important of the many perplexing questions facing the profession today. It is not by any means confined to the education of professionals themselves. It concerns also the education of the public they (would like to) serve.

In general, the layman is almost completely unaware of the quality and the variety of services the competent architect has to offer. He knows nothing of such an architect's abilities as an organizer and administrator and often has but slight respect for his æsthetic judgment. At various times during the past few months I have heard otherwise well informed laymen refer to architects as designers, draftsmen, builders, and artists. Not one seemed to understand that an architect could be all these and more. The architect as a financial advisor on building was non-existent to them. Such a preposterous state of affairs exists for no other profession and its remedy lies only in education.

The public, like the late Will Rogers, "only knows what it sees in the papers." It has seen nothing of architects and architecture. The public's education must come in the form of advertising publicity. Surely advertising can not be considered below the dignity of a profession whose dignity is threatened with total extinction. Surely the urge to provide America with better building should be stronger than the tradition of the Ivory Tower.

The Ivory Tower has been shaken to its foundations by tremendous social and economic shocks. The profession must repair to a more stable, a more flexible, and a more prominent structure.

AT LARGE IN THE LIBRARY

CIVIL AIR DEFENSE *by Lieut. Col. Augustin M. Prentiss, U. S. A. Largely based on British government recommendations. (Published by McGraw-Hill Book Co. Inc., New York, $2.75).*

Colonel Prentiss's book is an unusual combination of history, technique, and prophecy. The history and prophecy come unexpectedly in a book which appears primarily intended as a set of rules of thumb, a sort of army manual for the immediate use of the civil defense army now being called out.

The technical information presented is very comprehensive. The book discusses the various instruments employed—explosive, incendiary, and gas—and their effects as recorded in data published in Europe, and goes on to describe in detail organizational and technical devices of protection which, for the most part, appear based on official British practice.

The fact that the author is an expert in chemical warfare becomes apparent as he develops this subject. His broad approach to the problem is admirable and touches the root of the whole matter of civilian defense. In a paragraph headed "Public Education" he says: "Full and free public discussion by *qualified experts* (author's italics) of the real powers and limitations of gas should be encouraged and widely disseminated by all forms of public presentation, such as the press, radio, and motion pictures."

Precisely, but should not this excellent suggestion embrace all other factors involved? Such a process would give an opportunity for qualified experts to assist the whole program of civilian defense *now*, when as Colonel Prentiss points out wisely elsewhere, "It is essential that passive defense plans should be formulated and put into effect in time of peace."

The chapter dealing with the protection of industrial establishments is excellent, and includes not only a very comprehensive and immediately useful list of items to be dealt with, but an excellently drawn up and complete scheme for organization. S. C.

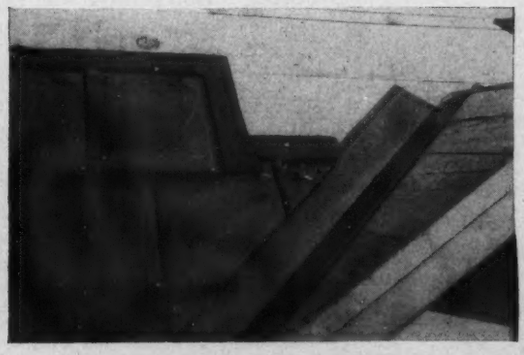
A HANDBOOK OF PERSPECTIVE DRAWINGS, *by James C. Morehead and James C. Morehead, Jr. ($4.50, vi plus 166 pages, including 77 pages of drawings, and 56 small drawings, 9" x 12" —James C. Morehead, Publisher, 4815 Bayard St., Pittsburgh, Pa.)*

The recent publication, "A Handbook of Perspective Drawings," is a notable and surpassing contribution in its field.

Its masterly presentation, its profusion of splendid drawings, the

The orange porcelain enamel tiles which form the roof of this Chicago Salt Box are made by the Toledo Porcelain Enamel Products Co., Toledo, Ohio.

Detail showing hip and eave finish with Toledohio porcelain enamel tiles. All needed shapes for any roof are supplied by this tile manufacturer.



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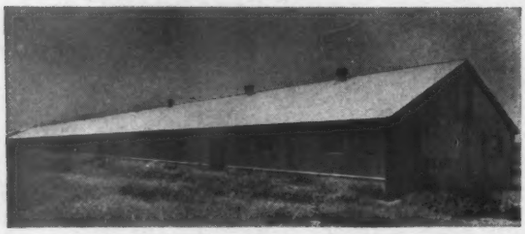

• ARMCO *Ingot Iron was also used for the roofing and siding of these inert storage warehouses.*

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ARMCO INGOT IRON

concise clarity of its text, and the orderly progressiveness of its contents will appeal to student, practitioner, and specialist alike.

Professor G. W. Baumeister, Associate Professor of Graphics, University of Pennsylvania, considers it to be "much more a reference book than a textbook," and recommends it for library use. Professor John F. Harbeson, Chairman of the Department of Architecture, University of Pennsylvania, and Professor of Perspective Drawing at the Pennsylvania Academy of Fine Arts, feels that "it will be a very good book for the classroom teaching of perspective to architects." He is particularly impressed with its exposition of three-point perspective. HARRY STERNFELD

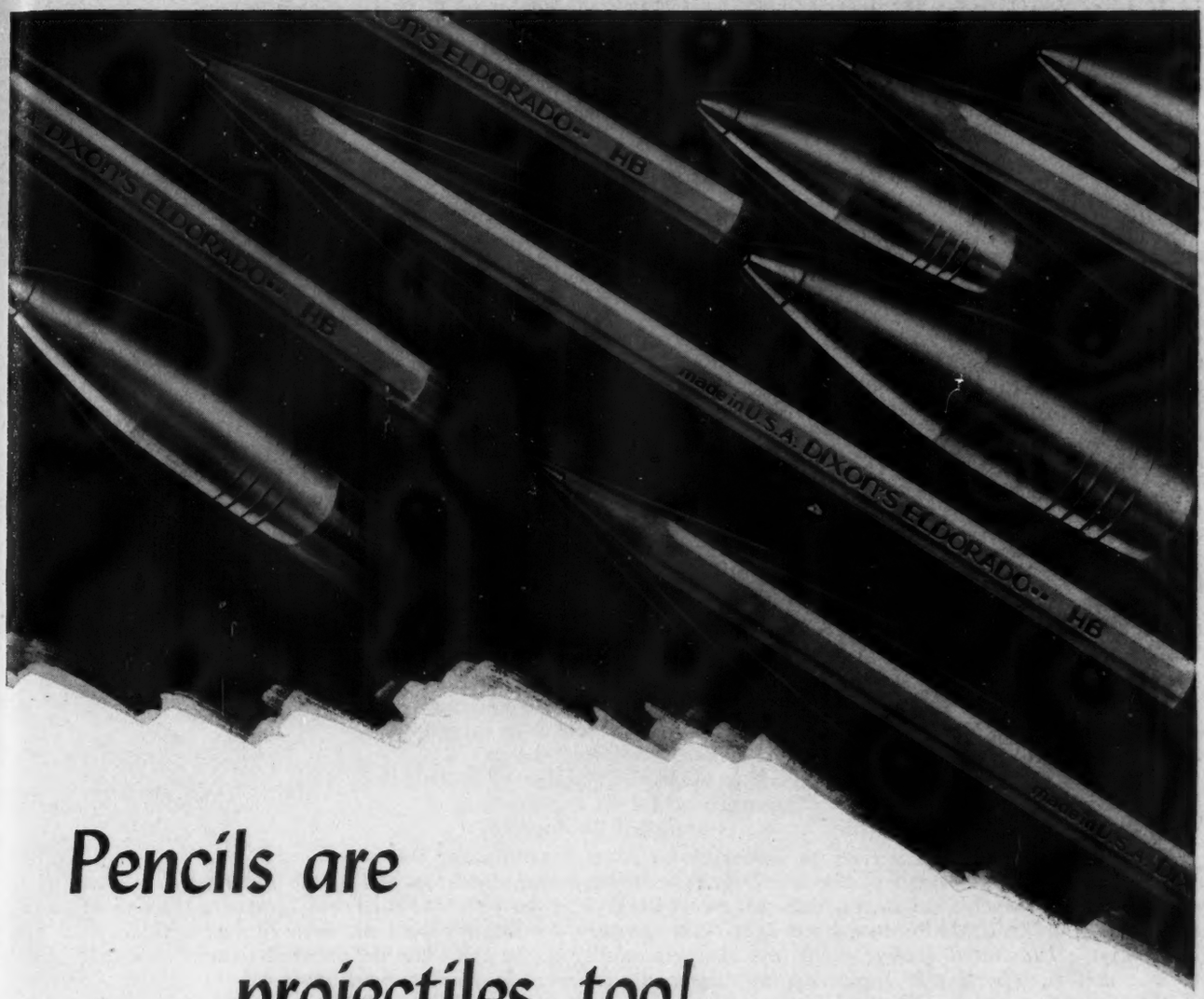
PUBLICITY IS BROCCOLI, *by Constance Hope ($2.00, 264 pages, illustrated—Bobbs-Merrill Co., 468 Fourth Ave., New York.)*

Fashion may be spinach to Elizabeth Hawes but publicity is definitely broccoli to Constance Hope—broccoli served up with a sauce of reminiscences of the adventures and misadventures of her firm, Constance Hope Associates, Inc.

As Miss Hope points out, few people other than harassed editors know exactly what publicity really is. Sometimes even the clients don't know. The consensus of opinion would seem to be that publicity is some form of the advertising business, or a sort of free-lance writing service.

There are three types of this peculiar service: the press agent who refuses to believe that there is such a thing as bad publicity; the publicist who attempts, in addition to making the client well known, to create a definite sort of impression of his client; the public relations counsel who functions mostly as a cover-up man for large corporations when a senatorial investigation is about to break.

Architects should consult the publicist, who would not only see that the architect's name is before the public eye, but also see that the mention is made in the proper vein. If, for instance, the architect is best known for one or two large buildings he has designed but his heart and talents lie in the designing of small modern homes, the publicist will arrange with the Woman's Page editors for interviews on Modern Living or How To Have Your Dream House For Fifty Dollars a Month and the FHA. JACK SHELDON ARNOLD



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PANAMA PANORAMA

On board the "S. S. Cristobal":

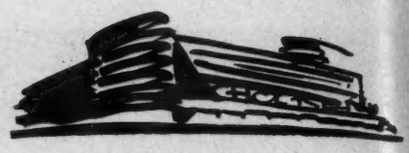
On a wave of leave-taking, Panama Pete finds himself on board the good ship "Cristobal," one of the two remaining Panama Liners in service on the New York run, the flagship "Panama" having been confiscated for transport purposes. The "Cristobal," therefore, is filled to capacity with States-bound Canal Zoners. Among them are *C. Norman Little* (the "C" in the right place for once, please note) and *Ralph Otten,* both of the Canal Zone Architect's office.

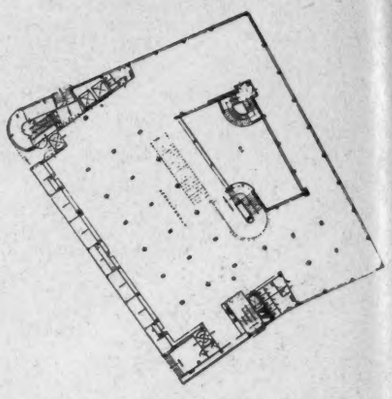
With the "goings" there are also some "comings"! Recent arrivals among the architects are *Bob Stoll, Arlie (Boo Poo) Purdue, George Rockrise,* a Syracuse lad formerly with Harrison & Fouilhoux, *Jimmy Wise* of Columbia, and *Bob Ballinger* of Cornell, who had the unique experience of sailing down on a transport that was blacked out all the way.

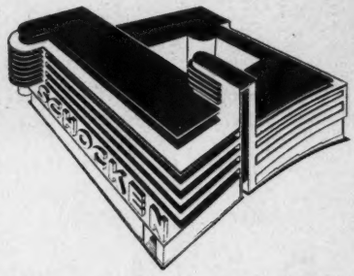
A fairly ambitious hotel project is being promoted by States backers for an El Volcan site. This part of the interior of Panama near the Costa Rican border is one of the most beautiful sections of the country and, being at a high elevation, is remarkably cool; hence its growing popularity as a resort. A well-rendered perspective and plan of the proposed project, showing hotel and swimming pool, was exhibited recently in a local shop window and will be on view soon in Rockefeller Plaza, New York City. *Acock & Lloyd,* New York architects, are handling the job, and I am sorry that I cannot honestly award any Panamanian orchids to their design. There seems to be just two types of architecture that fit well into the Central American scene. On the conservative side there is the Spanish Colonial, and on the progressive side there is the truly modern. I feel that any one of several Panamanian architects would have turned out a more creditable design.

The State Department is to be commended for its appointment of

(Continued on page 48)



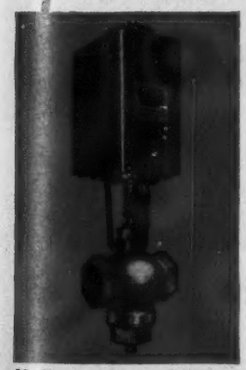




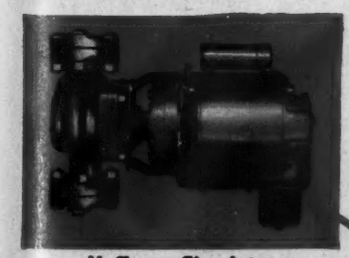
The retrospective exhibition of the work of Eric Mendelsohn, which opened at the Museum of Modern Art, New York, on November 25th, includes executed works and projects designed in Germany, Russia, England, Palestine, and the United States, from 1914-1941. Some of his English work was done in partnership with Serge Chermayeff. Illustrated (above, right) are sketches, plans, of the Schocken department store in Stuttgart, Germany. Below, left, is the Anglo-Palestine Bank, Jerusalem; the Government Hospital, in Haifa, Palestine, is shown below, right. The exhibition will be on view at the Museum of Modern Art until January 11.

CONTINUOUSLY CIRCULATED HOT WATER

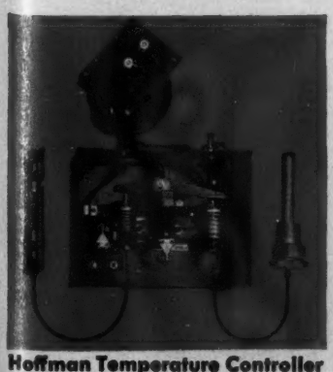
Wins heating contract in Defense Hospital!



Hoffman Control Valve



Hoffman Circulator



Hoffman Temperature Controller

The above diagram shows a typical application of Hoffman Hot Water Controlled Heat—today's most advanced method of distributing heat in accordance with the weather. In this hospital, the temperature in ten detached buildings is kept at a *constant degree* by Hoffman control units.

Hoffman Hot Water Controlled Heat combines *continuous circulation* with an outdoor temperature controlling device which effects a constant balance between heat loss and heat supply. Heat is supplied to the radiators on a gradually ascending or descending temperature scale—never in bursts of high temperature water.

This sensitive modulation of the heat supply confers two substantial benefits . . . the comfort of a uniform temperature and the economy resulting from elimination of over-heating. In addition, continuous forced circulation permits a *material reduction in the size of radiators, piping, boilers and firing units.*

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Hot Water

CONTROLLED HEAT

Hoffman Hot Water and Steam Specialties are sold everywhere by leading wholesalers of Heating and Plumbing equipment.

(*Continued from page 42*)

Rogelio Navarro to act as consulting architect for the new embassy to be built in the swank La Cresta residential sector of Panama. A happier choice could hardly have been made as Rogelio is well qualified by training (University of Virginia) and long experience in the local building field to render valuable service as consultant. Plans for the embassy are almost complete and construction should start in a couple of months. It will take about a year to complete the project. The two story structure will have extensive gardens, salons for receptions, eight bedrooms, terraces, an entire wing for servants' quarters, and a basement with garage, laundry, etc.—the whole thing to cost about a quarter of a million.

Shortly before sailing I was privileged to visit Rogelio's new residence which is under construction on a perfect hill site practically surrounded by the Panama Golf Club. From the terraces there are vistas galore of the sea, mountains, and the ruins of Old Panama. I look forward to seeing what promises to be one of Panama's most attractive residences nearing completion when I return to the Isthmus. Hasta luego! PANAMA PETE

BOSTON NOTES

On October 25 Governor Saltonstall signed our permissive bill for architectural registration. So there she stands, a genteel, legislative hunk where before there was nothing; a figurehead whose birth smile is not entirely caused by gas, and if it's toothless what baby's isn't? Just keep your tootin' and she'll teeth to beat hell, when the time comes. Many worked hard for the bill, a few were covertly against it, and there was no lobbyist in the picture.

Employment remains unchanged in its strong motion towards the engineers, as one by one the architectural offices dry up. Pay day at *Stone & Webster* must shake the F. R. bank to its foundations.

Housing has two slum clearance jobs on the boards—*Richard Shaw's,* finished in November, and a new South Boston project by a combination of architects probably centered round *Maginnis and Walsh.*

To my knowledge only three Boston practitioners have handled defense housing commissions, *Hugh Stubbins, Jr.* (FWA), *John M. Gray,* and *Royal Barry Wills* (USHA). The first two are building and the third just left the drawing boards, thereby permitting eight or nine sloggers to get reacquainted with their families. This project, titled Mass. 19023, resulted in so great a burst of spirit among the help that they formed the Massonott A. C. and elected *H. M. L. Giduz* (Alec the Excavator) as permanent president.

Increasingly one hears the question, "Do you think that the sometime profession of architecture will emerge in recognizable form after the present emergency ceases?" To say the smart word, samplings here and there have a negative ring. *P. A. L. Foulds,* dean of heating experts, said "No," while his heating hearties, Tracy and Wilkinson, smiled serenely from the everlasting security of their pipes. An electrical engineer, a sanitary specialist, and others suggested that the world would never stop kicking their dog around until he was fit only for sausage and the dinner table. I have record of a contention that the architect's fierce detachment from eye-gouging and all cohesive technique for self-preservation foretells his downfall; that the only positive step now being taken is the modernists' private play for favor with their Uncle Samovich. To paraphrase our ace fighter and white hope, Architect *Richard Shaw,* a fellow can't point the finger at encroachers until he has put his own house in order, and 'twere well to remember that the house is made up of something besides expensive finish and a big front door. The biggest part of the old home is the structure, the hidden sloggers who haven't been planed down and carved into fancy shapes, picked out in gold leaf. A corner post lacks status, but it does more to keep the roof on than the cut glass door-knob to milady's chamber (which has been known to draw a bead on silk stockings and burn the jernt down). To encroachers these men are just as useful as full-fledged architects would be, and rather less inhibited. If you don't control them you fail to master the problem, and that entails the formidable job of building an employer-employee group. But here's a possible hint.

The Architectural League of Boston, largest unaffiliated employee group hereabouts, has perked up upon hearing that the Massachusetts State Association of Architects is about to formulate a schedule of charges for professional service. These lads keep a few steam shovels busy in their spare time and feel the poignancy of proprietorial headaches based in their spare bed

(*Continued on page 56*)

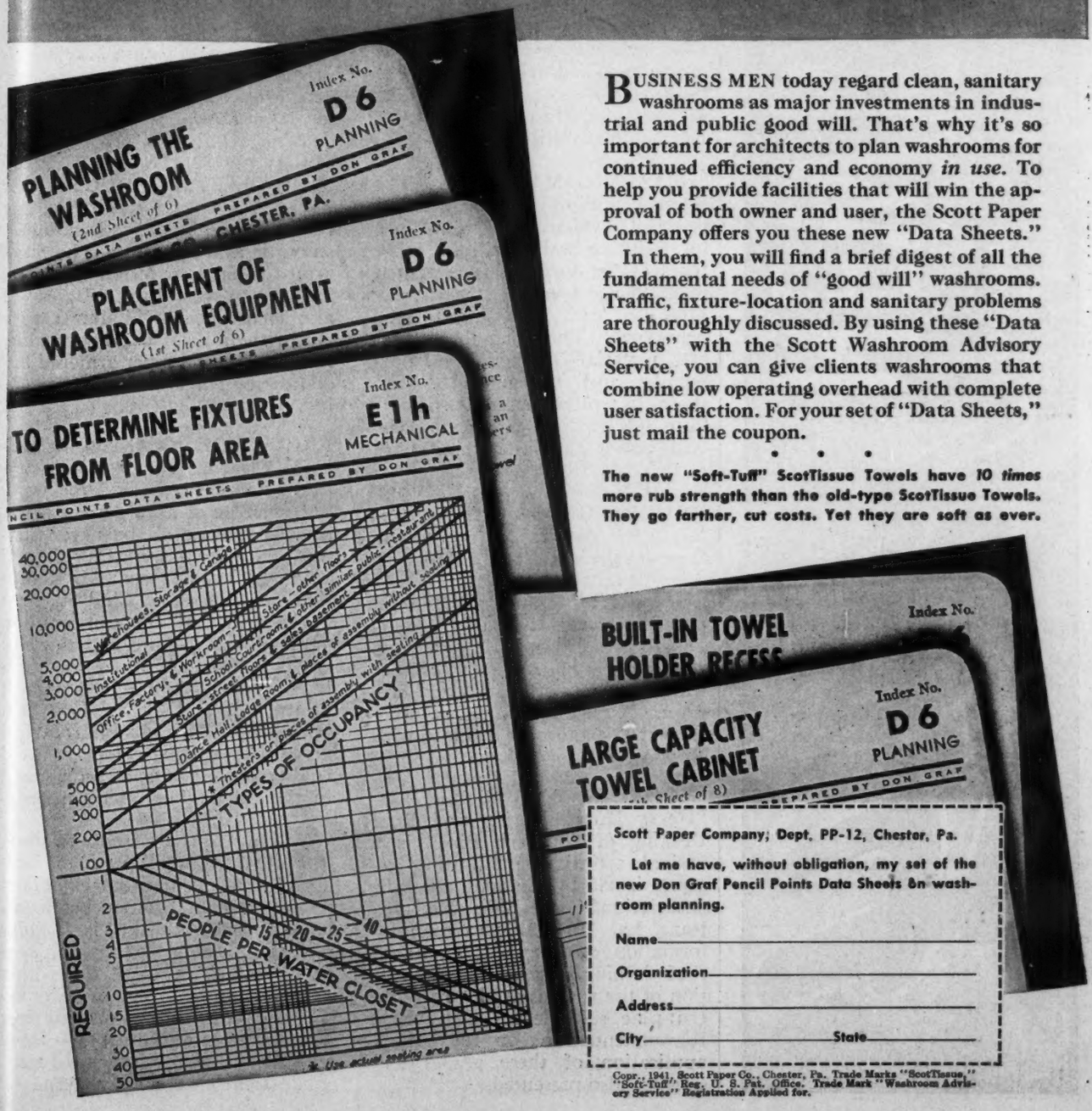
The Modular Service Association, Boston, recently assisted the National Housing Administration of Canada in developing and applying standardized details, based on the 4-inch increment, to a project at Sorel, Quebec. Details conformed closely to those developed by Committee A62 of the American Standards Association which loaned its architect, Prentice Bradley, to cooperate with the contractor. All schedules and materials for the basement and two-story building were worked out and pre-assembled in sections on the site. The job demonstrated that an architect's layout can be put on the 4-inch basis with no appreciable alteration to the original design, and that standard details can be coordinated.

FACTORY WASHROOMS

PUBLIC WASHROOMS

OFFICE BUILDING WASHROOMS

All can be planned for greater EFFICIENCY and ECONOMY with these NEW DATA SHEETS



BUSINESS MEN today regard clean, sanitary washrooms as major investments in industrial and public good will. That's why it's so important for architects to plan washrooms for continued efficiency and economy *in use*. To help you provide facilities that will win the approval of both owner and user, the Scott Paper Company offers you these new "Data Sheets."

In them, you will find a brief digest of all the fundamental needs of "good will" washrooms. Traffic, fixture-location and sanitary problems are thoroughly discussed. By using these "Data Sheets" with the Scott Washroom Advisory Service, you can give clients washrooms that combine low operating overhead with complete user satisfaction. For your set of "Data Sheets," just mail the coupon.

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The new "Soft-Tuff" ScotTissue Towels have 10 *times* more rub strength than the old-type ScotTissue Towels. They go farther, cut costs. Yet they are soft as ever.

Scott Paper Company; Dept. PP-12, Chester, Pa.

Let me have, without obligation, my set of the new Don Graf Pencil Points Data Sheets on washroom planning.

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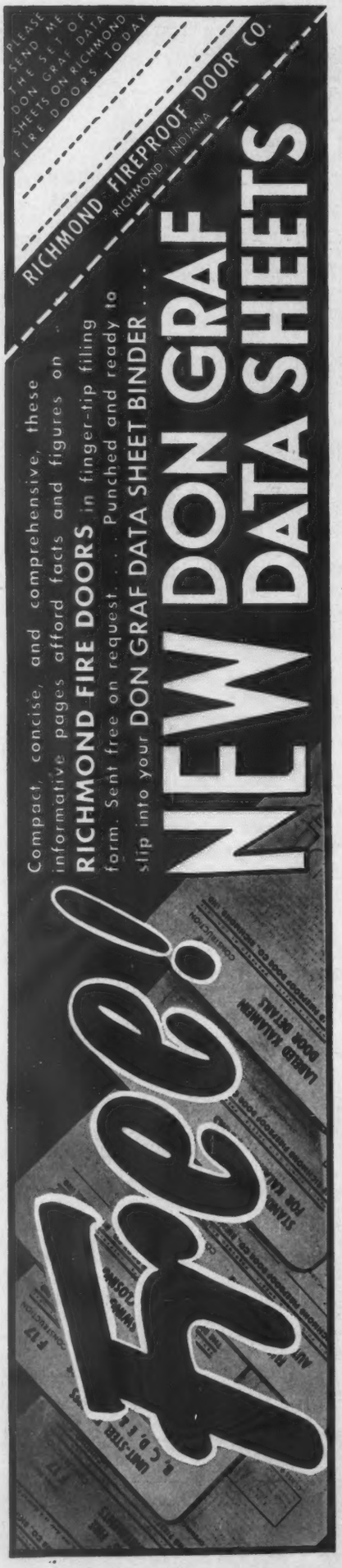
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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen, and Specification Writers

Publications mentioned here are all 8½ x 11 unless otherwise noted, and will be sent free, except as indicated, upon request to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

ACOUSTICS—"Less Noise—Better Hearing," a 92-page bound book from The Celotex Corp., 919 N. Michigan Ave., Chicago, presents an outline of the essentials of architectural acoustics for the practising architect and engineer. It discusses the physics of sound, acoustics of auditoriums, acoustical correction, sound absorbing materials, sound insulation, has a brief list of books on architectural acoustics for those wishing to study the subject in further detail. The book is replete with charts, diagrams, tables, illustrations. (A.I.A. File No. 39-B, priced at $1).

SURFACING MATERIAL—The Barclay line of plastic surfacing material, available in sheet form for finishing walls, ceilings, other types of flat surfaces, is presented in a 12-page booklet from Barclay Mfg. Co. Inc., 385 Gerard Ave., New York. The firm's three types of material—Tileboard, Panelboard, and Stream-Lined—are shown in typical installations. Short form specifications, application details, and actual color samples are included.

LEAD ROOFING—A 20-page catalog, A.I.A. No. 12-C, from Revere Copper & Brass, Inc., 230 Park Ave., New York, describes Roofloy, a sheet lead roofing for use on practically every type of building. Details on batten seam roofing, standing seam roofing, together with roofing specifications, are given. A page is devoted to ornamental spandrels made with Roofloy.

FLOORING AND DECKING—"Heavy Duty Flooring and Roof Decking of Southern Pine" is a revised technical publication recently issued by the Southern Pine Association, Canal Bldg., New Orleans, La. It contains design information on heavy flooring and roof decking, furnishes a description of the various grades of southern pine suitable for many uses. Recommendations on the correct application of these grades and sizes are also presented.

DOOR HINGES—Catalog No. 10 (A.I.A. File No. 27-B-1), from Soss Mfg. Co., 21777 Hoover Road, Detroit, Mich. shows the firm's line of invisible door hinges. Presented in 24 pages are blue-print type illustrations showing cross section details, instructions on how to install the hinges.

From the same firm: 24-page booklet, 3¾ x 6¾, "How to Obtain Beautiful Effects," which presents effective ideas for remodeling and modernizing doors, buffets, china closets, chifforobes, other ideas for the home cabinet maker and carpenter.

SISALKRAFT PRODUCTS—A 4-page, 5½ x 8¼ folder describing the use of Sisalkraft for backing up stucco is available from The Sisalkraft Co., 55 New Montgomery St., San Francisco, Calif. Described also is the use of Sisalkraft with and without solid wood sheathing, and the use of copper armored Sisalkraft for window and door flashing.

ARC WELDING COST BOOKLET—Cost of arc welding electrodes can be estimated for welding any type of joint on any thickness by the use of the new "Electrode Consumption Calculator," an 8-page booklet from Air Reduction Co., Inc., 60 E. 42nd St., New York. Included are consumption figures for both bare and shielded arc electrodes employed for making filet welds, square groove butt joints, "V" and "U" groove butt joints, etc. The amount of steel deposited per linear foot of weld is also shown. Basic formulas used in the calculations are included.

CEMENT HANDBOOK—A study of white cement and pertinent facts about its many uses are explained in a convenient, vest-pocket handbook recently published by Trinity Portland Cement Co., Dallas, Texas. Tests to evaluate the whiteness of different cements are explained. The firm also offers free samples of its cement to those wishing to make the suggested tests.

(*Continued on page 52*)

The attractive Nairn Linoleum walls and floor make this living-room in the boys' cottage at the Southbury Training School a very pleasant place. The outstanding durability of Nairn Linoleum will keep the room in good condition for years, in spite of the "wear and tear" of a houseful of boys.

Here's a specification that meets every "endurance" test for public buildings

—and provides color and beauty, too!

Exterior of the Southbury Training School of the Connecticut State Department of Public Works, Southbury, Connecticut.

NAIRN LINOLEUM is the architect's answer for the floors and walls of public buildings, where long-lived, hard-wearing materials are "musts."

Exceptionally durable against heavy daily foot traffic, Nairn floors can take it for years with hardly a sign of wear. Nairn walls are practically *permanent.* Under normal conditions they will last as long as the building itself!

But Nairn Linoleum does more than wear well. It is sound-deadening, easy on the feet, and easy to maintain. Nairn floors need only regular cleaning and waxing. A damp cloth removes dust or spatters from Nairn walls.

In addition to its sturdiness, Nairn Linoleum brings new beauty. Obtainable in a wide variety of colors and patterns, it makes possible charming decorative effects through the use of contrasting insets and borders.

Add moderate first cost and negligible upkeep to the other Nairn features and you have the perfect public building specification for both floors and walls. When installed by Authorized Contractors, Nairn Linoleum is fully guaranteed.

CONGOLEUM-NAIRN INC., KEARNY, N. J.

NAIRN

LINOLEUM FLOORS & WALLS

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 50)

MARBLE MANTELS—A four-page folder (A.I.A. File No. 22-A-21), from Vermont Marble Co., Proctor, Vermont, discusses the use of marble on fireplaces in various types of homes. A separate two-page sheet gives elevation sketches, as well as plans, details, and sections of various types of marble mantels.

RAWHIDE COVERINGS—Gutmann & Co., Inc., 1511 Webster Ave., Chicago, has available a 4-page folder, "Styling in Rawhide," showing application of the firm's Tufraw rawhide material as used for paneling, table top covering, and covering for lamps, desks, furniture, miscellaneous appointments.

Also available: folders featuring Tufraw Rawhide for luggage covering, and information on the adaptability of this material for interior decoration.

KNAPP METAL CASINGS
For Today's Housing Problems
HERE is the answer to modern housing's demand for casings that are simple, durable and easy to keep clean.
They fit present construction needs—for their feature of quick application contributes to early completion.
They are rugged and fire and vermin safe—with graceful lines.
You will find Knapp Metal Casings ideal for your requirements. Write for details.
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The Knapp Quality line includes: window and door trim • window stools • base • chair rails • blackboard trim and chalk trough • picture moulds • corner beads • grounds • screeds • and many other kindred products.
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ELECTRIC SPECIALTIES—An 18-page catalog, made up of loose sheets fastened in a folder, may be had from Prometheus Electric Corp., 360 W. 13th St., New York. Described and illustrated are electric plate warmers, towel dryers, clothes dryers (A.I.A. File No. 31-G-33), and wall type heaters for bathrooms and marine use, as well as organ loft heaters (A.I.A. File No. 31-G-31).

FORM TYING DEVICES—Richmond Screw Anchor Co., Inc., 816 Liberty Ave., Brooklyn, N. Y., has a 48-page catalog on its many form tying devices and accessories for concrete construction. Included are prefabricated form ties, hanger ties, beam wrapping, clamp systems, anchors, other reinforcing steel accessories, together with drawings showing the application of the various devices.

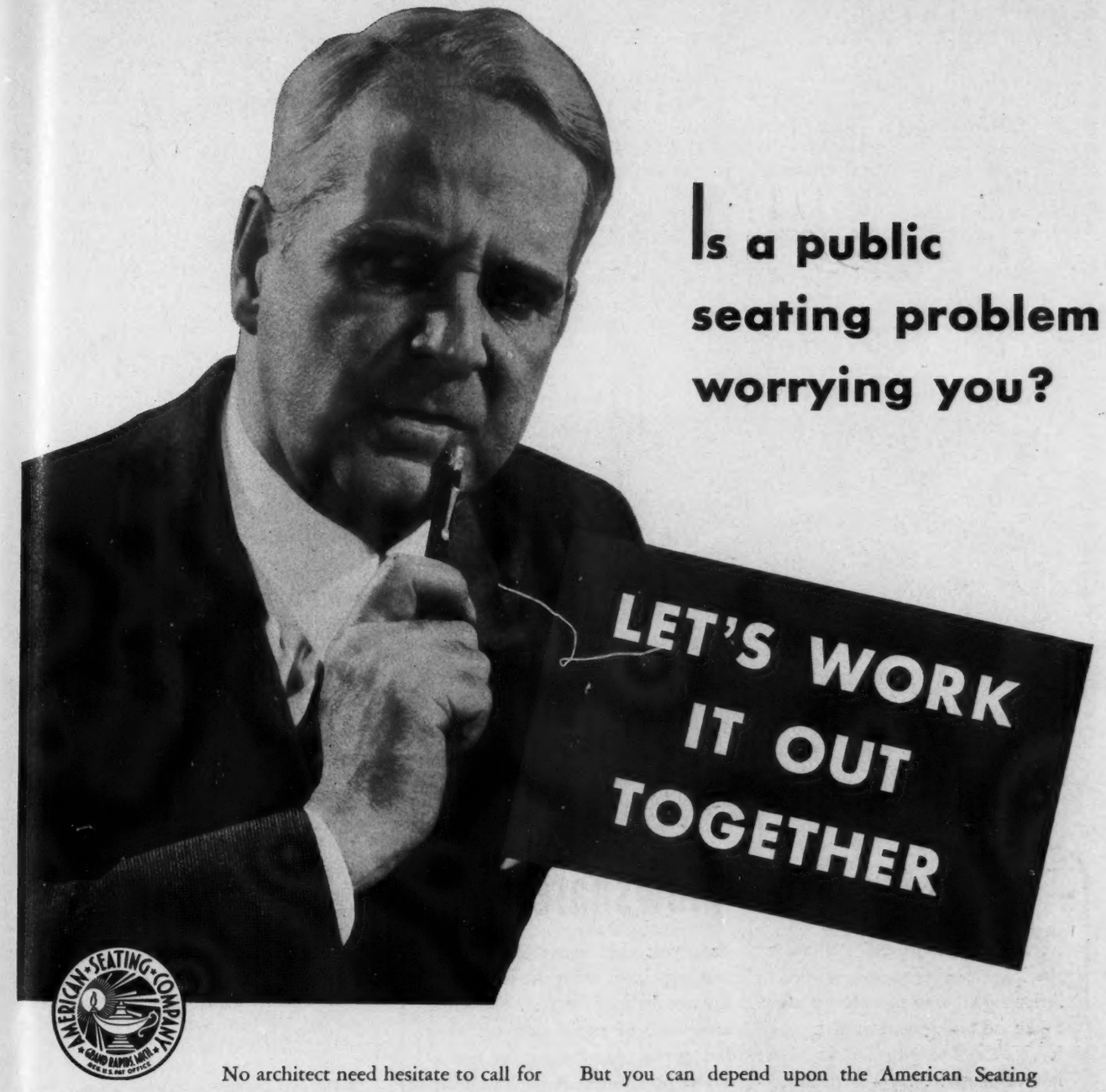
DRAFTING ROOM EQUIPMENT—Catalog No. 12, 48 pages, (A.I.A. File No. 35-H-31), from Hamilton Mfg. Co., Two Rivers, Wis., is divided into three sections, illustrates and describes the firm's line of tracing files, drafting tables, and such drafting room accessories as chairs and stools, drawing boards, other accessories to increase drafting room efficiency. A 16-page price list is included.

WHITE LEAD PAINT—"What to Expect from White Lead Paint," a 24-page catalog from Lead Industries Association, 420 Lexington Ave., New York, discusses the selection and application of white lead paint for interior and exterior use. A 4-page insert in the catalog contains a simplified white lead painting guide.

BRIDGE RAILINGS—"Bridge Railings, Their Design and Construction," from the American Institute of Steel Construction, Inc., 101 Park Ave., New York, presents in its 24 pages, a study of 15 typical details of various types of structural steel railings designed in accordance with functional and æsthetic requirements.

STAIR TREADS—A 4-page folder from National Bronze & Aluminum Foundry Co., E. 88th and Laisy Ave., Cleveland, Ohio, presents its Ten-Lox anti-slip stair treads, thresholds, and floor tiles. A separate detail sheet shows shapes, sizes, and styles in actual size.

(Continued on page 54)



Is a public seating problem worrying you?

No architect need hesitate to call for help when it comes to solving seating problems. For public seating is a study in itself.

In the seating of churches, theatres, schools, auditoriums—each presents its own special problems. And they're usually tough ones—with churches, for instance, such things as ecclesiastic symbolism, design harmony in pewing, furniture and woodwork. With theatres—floor slope and sight lines. But you can depend upon the American Seating Company for the right answers to all those problems. You'll be getting the facts straight from public seating headquarters—the place where the greatest public seating experience in the world has been accumulating for many, many years. There's not the slightest obligation on your part. So, whenever a public seating problem worries you, let's work it out together. We'd like to be of help.

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World's leader in public seating. Manufacturers of Theatre, School, Church, Auditorium, Stadium and Transportation Seating.

Branch Offices and Distributors in 73 Principal Cities.

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(*Continued from page 52*)

FUEL OIL BURNER—The Johnson fuel oil burner, Type 30-AV, a commercial and industrial type rotary oil burner, is described in an 8-page catalog from S. T. Johnson Co., 401 N. Broad St., Philadelphia. This particular burner is for use with No. 5 or lighter oils and is so approved by the Underwriters' Laboratory.

FURNITURE CUSHIONING—Construction manual on Latex Foam, where it comes from, what it is made of, and its application. This 48-page catalog gives specifications, pictures construction procedure on furniture cushions using Koyalon Foam. From United States Rubber Co., Mishawaka, Indiana.

Also from the same firm: 12-page catalog giving sizes and descriptions of such standard items using Koyalon Foam as bar stool cushions, theatre seat cushions, kneeling pads.

ASBESTOS SHINGLES—A 6-page folder, printed in natural color, illustrates the American Colonial asbestos shingles made by Johns-Manville Sales Corp., 22 E. 40th St., New York.

GLASS BLOCKS—The Insulux Products Division of Owens-Illinois Glass Co., Toledo, Ohio, has prepared three 4-page folders discussing the application of Insulux glass block to light, maintenance and heating problems.

FORMICA APPLICATIONS—A new 12-page catalog from Formica Insulation Co., 4613 Spring Grove Ave., Cincinnati, Ohio, illustrates the use of Formica for various decorative and building purposes. The catalog has a color chart of typical colors and inlays, as well as construction details showing paneling erection.

SCUPPERS—A new 4-page bulletin, A.I.A. File No. 14-P-6, has been issued by H. W. Covert Co., 339 E. 48th St., New York, on hooded, windproof scuppers for industrial buildings. Installation details, together with National Board of Fire Underwriters' regulations, and specifications, are included.

SKYLIGHT HANDBOOK—The scientific application of modern skylight construction in developing more daylight and ventilation in buildings is described in a manual (A.I.A. File No. 12-J-1) available from American 3 Way-Luxfer Prism Co., 2139 W. Fulton St., Chicago. A series of 11 x 15 sheets are folded into the manual, give cross section details on various American skylights.

COLOR HARMONIZER—Designed to aid in the selection of exact colors, patterns, and combinations for Nu-Wood interiors is the Nu-Wood Color Harmonizer booklet, from Wood Conversion Co., St. Paul, Minn. A special 6-page center section has actual Nu-Wood interiors illustrated in full color. The pages are cut in such a manner that by interchanging the wall and ceiling sections, 54 different interior treatments are possible. This gives the prospective user a picture of what the completed job will look like.

Also available: Case Study Nos. 4 and 5 on the firm's Sta-Lite insulated surfacing material used for interior decoration in a food store and automobile show room respectively.

swords AND plowshares...

. . . guns *and* bread! Whatever the job, whether for war or peace, Arkwright tracing cloths need make no compromise with quality. Years of testing in Arkwright laboratories . . . years of insistence on highest quality materials and highest standards of manufacture have prepared Arkwright for any national emergency. Today, you can order Arkwright tracing cloths with the same confidence in quality . . . the same assurance of rapid delivery that has given Arkwright its recognized position as America's leading manufacturer of tracing cloth for over twenty years! Arkwright Finishing Company, Providence, Rhode Island.

Arkwright TRACING CLOTHS

YOU BUILD MORE DURABLE, MORE BEAUTIFUL SCHOOLS *when you use Douglas Fir Plywood in them*

● A & M Consolidated School, College Station, Texas. All interior walls and partitions are sturdy, puncture-proof Douglas Fir Plywood. C. J. Finney, Ernest Langford, architects. Smith Building Co., general contractor.

● The walls of this high school gym in El Monte, Calif., will take punishment galore because they're Plypanel-grade Douglas Fir Plywood. Marsh, Smith & Powell, architects. Plywood often forms temporary gym floors.

● The trim, walls and booths in the photographic laboratory of the Art Center School, Los Angeles, are built of Douglas Fir Plywood. Where there is considerable moisture, the Exterior type should be specified.

● The smooth, flawless walls of architectural concrete formed against Plyform add greatly to the beauty of this elementary school in Tupelo, Miss. Designed by Overstreet & Town; built by W.P.A.

There is a proper type or grade for:

INTERIOR WALLS, CEILINGS
CASES AND BUILT-INS
CONCRETE FORMS
EXTERIOR FINISH
SHEATHING, SUB-FLOORING

● Douglas Fir Plywood is being used in increasing amounts in modern school construction because its versatility intrigues the designer . . . because its low-cost performance and durability please the taxpayer.

The Plypanel and Plywall grades build interior walls and partitions that are kick-proof and sound absorbent. They provide excellent insulation . . . are receptive to more finishes than any other wall material.

The concrete form grade, Plyform, produces smooth, finless concrete surfaces that require a minimum of finishing. Plyform serves as sheathing and lining combined . . . gives numerous re-uses when handled with reasonable care.

The Exterior type opens a new field of design possibilities. Because this type of Douglas Fir Plywood can be boiled without delaminating, because it comes in large panel sizes and because of its easy workability, it is being specified extensively for exterior finish in every climate.

The Plyscord grade is unsurpassed for wall and roof sheathing, subflooring, one-use concrete forms and other utility jobs. The big panels reduce labor costs . . . add greatly to the rigidity of walls, making them more resistant to earthquakes and high winds.

If you aren't acquainted with all the advantages of Douglas Fir Plywood in school construction, consult Sweet's Catalog or write for free literature and test data. Douglas Fir Plywood Association, Tacoma, Wn.

● The smart, streamlined exterior of the Penthouse Theatre at the University of Washington, Seattle, is water and weather-proof Exterior-type Douglas Fir Plywood. Note the pleasing curved surface formed by panels.

GENUINE DOUGLAS FIR PLYFORM Concrete Form Panel D.F.P.A. INSPECTED

GENUINE PLYWALL Douglas Fir Plywood WALLBOARD D.F.P.A. INSPECTED

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

PLYPANEL D.F.P.A.

EXT.-D.F.P.A.

GENUINE PLYSCORD SHEATHING D.F.P.A.

DOUGLAS FIR PLYWOOD *Real Lumber* MADE LARGER, LIGHTER SPLIT-PROOF STRONGER

(Continued from page 48)
lack of imagination but because back in the days of bustles and high, button boots someone fixed a six percent minimum for professional services and it stayed fixed.

Most architects figure a 2 per cent profit out of a variable gross, and they are certainly entitled to it. The six percent total for full services was gauged to meet that net and cover production costs as of Spanish War days. Meanwhile the business of existing has gotten vastly more expensive, and with no increase to speak of in the sum allocated for production costs your professional cannot pay ordinary craftsman's wages and make a profit, too. It all gets far worse when he accepts commissions at lower than six percent, and we all know the answer—home offices and jobs with encroachers. And we all know the cure—a solid front for all architects and draftsmen.

Says the League, in effect,"Why not bring this schedule up to date? When old Atropos snips the hawser to some great architect's floating kidney, a slogger steps from the ranks to fill the gap. And until the sweet sorrow of that day should not the understrapper receive wages equal to those of other craftsmen in the building industry?"

Recently a Grade A draftsman in an engineering office was approached by a new man holding an architect's scale. "How do you use this thing?", he asked. Said another (re:drafting), "I usually catch on to things pretty quick, but this seems hard to grasp."

Mike Bonish reveals that his fresh air trainer, that indefatigable fisherman *Alec Shisko,* rowed out one sunny morning with three fish for bait, and rowed in at sundown with one measly piscatorial trophy.

LEON KEACH

PLASTICS AWARD

Major awards for extraordinary architectural achievements with plastics were made in the recent sixth annual Modern Plastics Competition, sponsored by MODERN PLASTICS magazine, New York. Top awards in the Architectural Classification were given Pierce Laboratory, Inc., Summit, N. J., for the Pierceway residential and industrial type surface wiring system, using plastic as its basic material; screens, display cases, and counters in the Coty Salon, New York, designed by Dorothy Draper and executed in Plasdecor by Alice Donaldson; Co-operative Displays, Inc., Cincinnati, Ohio, for its Lumitile, a plastic tile; and Russel & Erwin Mfg. Co., New Britain, Conn., for its use of Lucite as a decorative accessory on entrance bars for doors in the home, office, and large buildings.

In addition, the firm of *Thalheimer & Weitz,* Philadelphia architects, won an honorable mention for General Baking Co. in the Display Classification, for their design of a giant loaf of bread used as a sign over the baking company's plant.

PLANNING DEGREE OFFERED BY CORNELL

As a result of a successful six-year experiment in offering courses in city and regional planning as a field of undergraduate study, the Graduate School at Cornell University, Ithaca, New York, has announced that, beginning this fall, graduate students may elect to major in this field for the degree of Master in Regional Planning.

The work is under the administration of *Professor George H. Sabine,* Dean of the Graduate School. *Gilmore D. Clarke,* Professor of Region Planning and Dean of the College of Architecture, and *Thomas W. Mackesey,* Assistant Professor of Regional Planning, are in charge of planning instruction.

FLORIDA CONVENTION

The annual convention of Florida architects, held December 5-7 at the Brazilian Court Hotel, Palm Beach, Fla., was sponsored by District 10 of the Florida Association of Architects. Business meetings, as well as the exhibit of members' work and building materials, were held at the Norton Gallery and the School of Art.

DEFENSE HOUSING

A cooperative housing plan for defense, designed to provide homes at moderate cost for families with incomes between $1,200 and $1,800, was announced recently by *Charles F. Palmer,* Coordinator of Defense Housing. Under the plan, groups of workers may organize cooperatives and apply to the FHA for mortgage insurance under Defense Housing Title VI.

Cooperatives will employ their own architects to select sites and prepare plans. Although built in groups for the sake of economy and for good community planning, only individual homes are contemplated under this plan. No multiple-unit housing is included.

Information concerning methods of financing, organization, and operation of the cooperative may be had from the Coordinator's office which has prepared a description of the plan for the guidance of interested groups.

SAN FRANCISCO PLAN

A detailed plan to house 374,000 men, women, and children in San Francisco in event of fire, bombardment, or earthquake has been submitted to *F. H. LaGuardia,* Director of Civilian Defense. The plan, prepared by executives of the city's Red Cross Disaster Relief Commission, Shelter Division, and members of the San Francisco Society of Architects, was drawn up in two parts.

The first part contained a survey of schools, hotels, apartment houses, and garages which could accommodate 374,000 persons immediately folowing a disaster; second, especially-planned relief shelter camps, built for 1,000 persons each, to provide housing for those whose homes had been destroyed.

The plan was drawn up with the assistance of the following architects: *W. Clement Ambrose, Norman K. Blanchard, Samuel L. Byman, Irving F. Morrow, William H. Rowe, J. Francis Ward,* and *Harold H. Weeks.*

Meals for the disaster-stricken populace would be prepared at a central depot, then trucked to the schools and other housing centers. Relief shelter camps planned by the architects for prolonged emergency would be divided into two, four, and six person family units, with separate accommodations for single men. Constructed either in the city's parks, or in close-by rural areas, the camps would have heated dormitories, mess hall and kitchens, toilet and shower facilities, other necessary equipment.

ARCHITECTS AND CIVILIAN DEFENSE

A nationwide campaign to make the services of trained technicians available to civilian defense committees in every major city has been recommended to the American Institute of Architects by *Ben Nash,* of the American Designers Institute. The program would be undertaken jointly by the two Institutes. Architects and designers should integrate themselves more

(Continued on page 58)

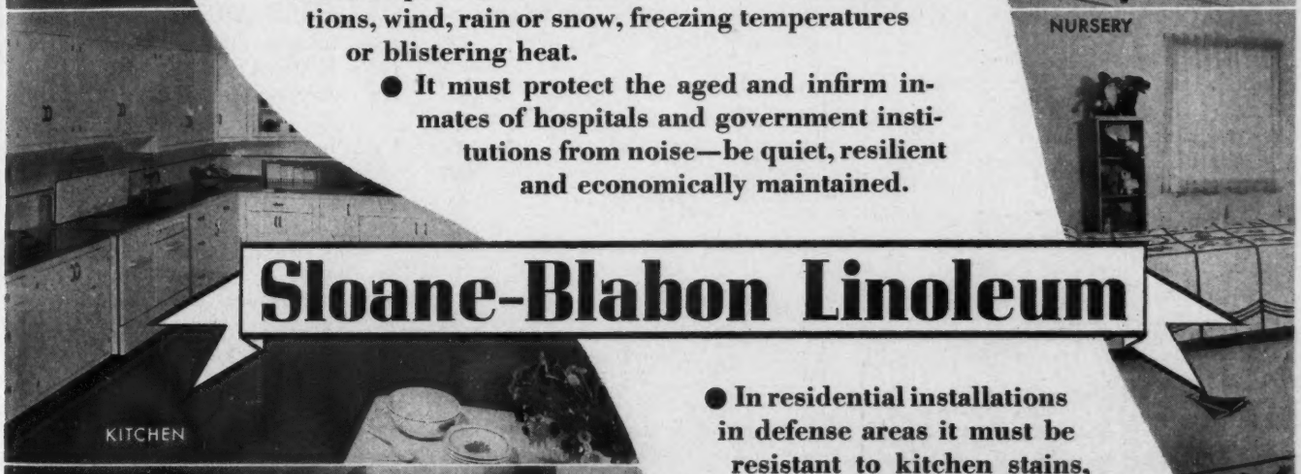
FOR DEFENSE ... *underfoot*

● Sloane-Blabon Linoleums are serving defense demands in installations through the country, from the small floors of apartment kitchens and nurseries to the vast floor areas of new Government buildings, veterans' hospitals and even our most modern "ships of the line."

● Such installations require a linoleum that will give *all-out* protection.

● It must "armor-plate" floor surfaces of naval vessels against the toughest kind of wear and abuse —stand up under the most severe weather conditions, wind, rain or snow, freezing temperatures or blistering heat.

● It must protect the aged and infirm inmates of hospitals and government institutions from noise—be quiet, resilient and economically maintained.



Sloane-Blabon Linoleum

● In residential installations in defense areas it must be resistant to kitchen stains, grease and grime, stand up under the wear and tear of hard playing youngsters in the nursery, and, to safeguard health, be easy to keep clean.

● Sloane-Blabon Linoleums are today meeting these exacting specifications in thousands of installations throughout our defense areas.

Sloane-Blabon Corporation
295 Fifth Ave., New York, N. Y.

A National Organization with Distributors Everywhere

Moisture Problem Solved!

"Quilt" insulated house, Montgomery County, Maryland. Architects: Francis Palms, Jr., and Lewis E. Stevens, Washington, D. C.

The Problem of harmful moisture condensation in the walls of insulated houses is solved by the use of Cabot's "Quilt". Air space on each side of the "Quilt" permits air circulation, which prevents accumulation of excessive moisture. Cabot's "Quilt" is rot-proof, vermin-proof, stays permanently in place and does not settle. Write for free booklet, *Build Warm Houses*. Samuel Cabot, Inc., 1296 Oliver Building, Boston, Mass.

"Quilt" insulated house, Chestnut Hill, Mass. Architect: Miss Eleanor Raymond, Boston.

Cabot's "Quilt"

The Time Tested Insulation

(*Continued from page 56*)
actively into the civilian defense efforts of their communities, urged Mr. Nash.

"The background of training and experience of the architect and the designer are particularly fitted to move into this, the biggest and most vital task affecting the way of living in America," said Mr. Nash. "There is a definite need for architects and designers in solving the newly-arising problems of civilian health, safety, and economics through proper planning and creative ingenuity," he said.

CONSTRUCTION INDUSTRY IN DEFENSE

A series of advertisements in the SATURDAY EVENING POST, designed to help inform the public of the indispensable part America's basic industries are playing in the defense program, has been begun by Johns-Manville Corp., 22 E. 40th St., New York. Each advertisement since last May has been in the form of an article by a well-known writer; the only reference to Johns-Manville is a brief sponsorship note.

Sixth in the series of advertisements, scheduled for the December 13 issue, is an article by Frazier Hunt entitled, "The Miracle of Defense Construction," which recounts the amazing achievements of the construction industry in the preparedness program.

T-SQUARE CLUB MEETS

Members of the T-Square Club of Philadelphia listened to several discussions on glass at their recent meeting. The commercial field for glass was discussed by *Robert G. Watson,* while Messrs. *Kellogg* and *Cochran,* of Pittsburgh-Corning Corp., presented the story of the glass industry. Sketches and cartoons for stained glass were displayed by *D'Ascenzo Studios* and *Henry Lee Willet Studios.*

Duncan Miles Terry also discussed the many treatments and varied techniques he employs in using glass as a decorative medium.

LOUIS SIMON RETIRES

Louis A. Simon, Supervising Architect of the Public Buildings Administration of the Federal Works Agency, has retired from the government service as of December 1, after having served forty-five years in the Supervising Architect's office. He entered the office in 1896, became head of the architectural division in 1905. When the Supervising Architect's office was transferred in 1934 to the Procurement Division of the Treasury, Simon was appointed Supervising Architect. The Supervising Architect's office and collateral units of the Procurement Division were shifted in 1936 to the Federal Works Agency. The PBA is one of five agencies under the FWA.

In recognition of his services to architecture, Mr. Simon was awarded the gold medal of the Association of Federal Architects in 1937, and in the same year was made a Fellow of the American Institute of Architects.

F.S.A. DESIGNERS

The presentation on pages 709-720 of the November issue of PENCIL POINTS of the work of the designers of the Farm Security Administration communities, omitted mention of some of the personnel responsible for the work shown. Credit should be given to the personnel of District Six, San Francisco, comprising the following:

Herbert P. Hallsteen, District Engineer; *Architects* Burton Cairns (who died in 1939), Vernon DeMars, Lucien Stark, William Edie, Arthur Steiner, Howard Sweeting, Frank Thompson, and Robert Williams; *Landscape Architects* Garrett Eckbo and Milton Butts; *Engineers* Nicholas Cirino, Scott Beamer, John Clark, Allen Crenshaw, George Davis, Harry Donaldson, Eion McKay, William Pirrone, John Raymond, and Winsor Wilkinson.

The organization is under the direction of John F. Donovan, *Chief Engineer,* and Leo F. Stock, Jr., *Assistant Chief Engineer,* Washington, D. C.

YELLIN EXHIBIT

During the month of December, the main gallery at the Architectural League of New York will be devoted to a Memorial Exhibition of the metal work of the late *Samuel Yellin,* who has been credited with the revival of good metalwork design and craftsmanship in America. Examples of his work may be found on a number of important buildings erected during the past thirty years.

CHRISTMAS CARD EXHIBIT

The Museum of the City of New York, Fifth Ave. between 103rd and 104th St., New York, has opened a special exhibition entitled, "The Same Old Wish." The exhibition, which will remain current until January 2, consists of about 200 Christmas cards tracing the development of the Christmas card from 1870 to the present day.

Westinghouse *Electricana*

Brief items to illustrate the utility of Westinghouse electrical equipment in a variety of applications, which may suggest ideas of value in your building projects.

★ The examples shown in the "Electricana" below are but a few from the thousands of Westinghouse products available for the building industry. Specification details on many of them may be found in Sweet's Catalog. For more complete information, and for quick, dependable help on your electrical needs, call your nearest Westinghouse office.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
EAST PITTSBURGH, PA.

ELECTRICAL EQUIPMENT with space-saving characteristics matches the modern design of this educational building. Elevators, lighting, panelboards and switchboards furnished by Westinghouse. *Cathedral of Learning, University of Pittsburgh, Pittsburgh, Pa.*

AIR CONDITIONING, silenced by ingenious sound traps and acoustical duct linings, provides the temperature and accurate humidity control required for comfort in these broadcasting studios. Equipment by Westinghouse. *NBC Building, Los Angeles, Cal.*

LIGHTING for cashiers' windows is ample at the swank new *Turf Club, Albany, Cal.* Westinghouse Fluorescent lighting equipment also provides soft, even, glare-free light in clubhouse, lounges, dining rooms and promenades.

WATER COOLERS by Westinghouse serve defense workers in this new clothing plant, engaged in army uniform contracts. Hermetically-sealed refrigeration units with 5-year protection plan provide dependable water cooling at lowest maintenance cost for every industrial and commercial need. *Haggar Company, Dallas, Texas.*

ELECTRICAL STAIRWAYS, with capacities of 6,000 passengers per hour, assure smooth passage in this Air Terminal, from basement to lobby and from lobby to terminal floor. Westinghouse elevators also serve other parts of the

Westinghouse

OBITUARIES

RALPH H. DOANE

Ralph Harrington Doane, special instructor at Massachusetts Institute of Technology, and the architect who designed the Motor Mart and the Rindge Technical High School in Boston, died November 6, aged fifty-five. He had served as consulting architect for the Philippine Government from 1916-1918, supervised construction there of more than 100 buildings.

For the design of the Motor Mart he received the *Harleston Parker Gold Medal* in 1927 for the "best architectural work in metropolitan Boston." In 1930 he won three prizes awarded by THE BOSTON HERALD for architecture in New England.

DWIGHT HEALD PERKINS

Dwight Heald Perkins, architect and park planner of Evanston, Ill., died on November 2, aged seventy-four. One of the nation's foremost educational architects, he has left more than 200 school, park, and public buildings as a testimonial to a lifetime devoted to planning broader educational and recreational resources for the people of the Chicago area.

POSITIONS WANTED

REGISTERED ARCHITECT—30 years old, registered in Pennsylvania since 1937, seeks connection elsewhere due to present condition of private building. Henry S. Berg, 6701 N. Broad St., Philadelphia.

DRAFTSMEN WANTED

DRAFTSMAN WANTED: Young man living in New York metropolitan area, who can make accurate ink drawings for publication. Man should have had some experience and a junior draftsman's knowledge of construction. Ability in design is of no value. Salary $30. Give complete particulars in first reply. Include photograph. Box 103, PENCIL POINTS.

ARCHITECTURAL DRAFTSMAN wanted by leading interior decorator. Must be experienced in interior designing and in traditional ornament. State age, experience, and salary desired. Box 101, PENCIL POINTS.

DRAFTSMAN WANTED for temporary work on a school design. Must be familiar with modern school construction and capable of designing reinforced columns, beams, and floors. Job will last only a month or two. Lodging can be furnished if necessary. Send experience record. State salary expected weekly. Address, Box 104, PENCIL POINTS.

MECHANICAL DRAFTSMAN. Young, recent graduate wanted by responsible elevator manufacturer. Must be rapid, dependable, and able to produce excellent work. Good salary and real future for right man. Give all details in reply. Box 102, PENCIL POINTS.

City of Janesville
Wisconsin
September 11, 1941
Barber-Colman Company
Rockford, Illinois
Gentlemen:
Sometime before the heating season gets under way we would like to have one of your field men check over the controls in our building.
We have no specific trouble to report in fact, our repair expenses on your controls have been negligible for the past eleven years.
Please have your man come in to see me before he calls his inspection.
Very truly yours,
Henry Traxler
City Manager
WHAT WE MEAN BY
"MINIMUM MAINTENANCE"...
repair expenses on your controls have been negligible for the past eleven years.
The Janesville City Hall, Janesville, Wisconsin, is a fair sample of how Barber-Colman Electric Controls require little, if any, upkeep expense. This building has individual room control — a fairly elaborate installation — yet, as Mr. Traxler's letter states, the outlay for repairs has been "negligible" in the eleven years since the system was put in. Barber-Colman Electric Controls are designed and built to give a lifetime of accurate and reliable service with MINIMUM MAINTENANCE cost. This is an important factor that deserves thorough consideration when purchasing a control system.
SPECIFY!
BARBER B-C COLMAN
ELECTRIC CONTROLS BY BARBER-COLMAN
1230 ROCK ST. BARBER-COLMAN COMPANY ROCKFORD, ILL.

VENUS *Drawing* PENCILS

VENUS DRAWING Pencils are made in 17 degrees, 6B softest to 9H hardest, and VENUS TRACING Pencils—for direct tracing and blue print work—in 3 degrees, T1, T2 and T3.

We shall be glad to send you samples in any degree you wish.

AMERICAN PENCIL COMPANY
502 Willow Avenue
HOBOKEN, N. J.
Venus Pencil Company, Ltd., Toronto
Venus Pencil Company, Ltd., London

A. The reflections in the water are indicated with both vertical and horizontal broad pencil strokes, using a Venus 2B for the lighter values and Venus 4B for the darker ones. Note that these strokes should cross each other as little as possible.

B. The foliage in the upper right foreground was drawn with strong, quick strokes with a Venus 6B, almost consistently in one direction, indicating the sweep of the foliage and leading the eye towards the point of interest (the house).

COMPETITION ANNOUNCEMENTS AND RESULTS

HAMLIN PRIZE

The Hamlin Prize, highest award bestowed by the Columbia University School of Architecture for a decorative design, has been won for 1941-42 by Paul Pippin, a fourth-year student, for the best rendition of a fountain in a housing development.

The winning design provides for a structure of brick and reinforced concrete which combines as a unit a bus stop, public toilets, and a fountain, planned as a feature of a central plaza surrounded by stores.

For the past three years, Paul Pippin has conducted a column, "Critical Youth Wields the Flail," in PENCIL POINTS.

PLYM FELLOWSHIP

The committee in charge has announced the twenty-ninth competition for the award of the *Francis J. Plym Fellowship in Architecture.* The value of the Fellowship is $1,200, to be used toward defraying the expenses for one year in Europe for study of architecture. Owing to the disturbed conditions in Europe, the winner may not be able to go abroad for study, but may have to confine his travel to the United States.

The competition will be open to all graduates of the Department of Architecture in the curriculum in architecture of the University of Illinois, Urbana, Ill., who are American citizens of good moral character, and who are under thirty years of age on June 1, 1942.

The committee has also announced the nineteenth competition for the award of the *Plym Foreign Fellowship in Architectural Engineering.* The value of the fellowship, the conditions of the competition, are the same as for the Architectural fellowship.

LANGLEY SCHOLARSHIPS

To encourage higher education in architecture, the American Institute of Architects will award the *Edward Langley Scholarships* in 1942 for advanced study, research, and travel, according to *Richmond H. Shreve,* A.I.A. president. Any resident of the United States and Canada, engaged in the profession of architecture, is eligible.

The awards, limited to ten and with $1,500 as the maximum stipend, provide for advanced study, research, and travel.

Proposals of candidates will be received at the national headquarters of the Institute, 1741 New York Ave., Washington, D. C., from January 1 to March 1, 1942.

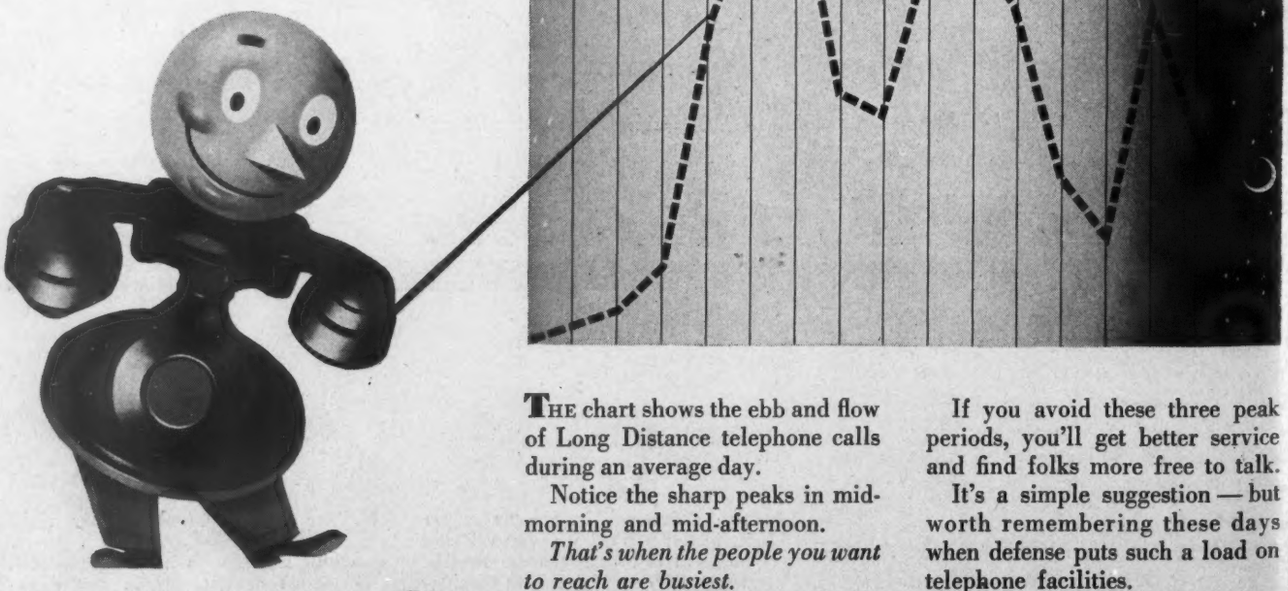
STEEDMAN FELLOWSHIP

The governing committee of the *James Harrison Steedman Memorial Fellowship in Architecture* has announced the sixteenth annual competition for this award. Under normal conditions, the Fellowship offers an award of $1,500 for a year of study and travel in foreign lands.

The Fellowship is open to all graduates of recognized architectural schools, who are between the ages of 21 and 31 at the time of appointment, and who have had at least a year of practical work in the office of a St. Louis architect.

Forms of application for registration can be obtained upon request to the Secretary of the School of Architecture, Washington University, St. Louis, Mo., to whom application blanks must be returned not later than January 31.

What are the best times for your Long Distance calls?



THE chart shows the ebb and flow of Long Distance telephone calls during an average day.

Notice the sharp peaks in mid-morning and mid-afternoon.

That's when the people you want to reach are busiest.

See the third peak at 7 P. M.

That's when other people are most likely to be telephoning, too.

If you avoid these three peak periods, you'll get better service and find folks more free to talk.

It's a simple suggestion — but worth remembering these days when defense puts such a load on telephone facilities.

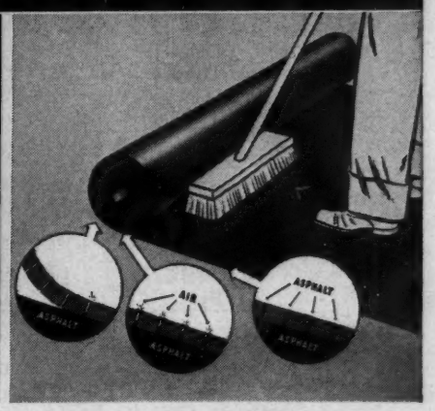
Long Distance
helps unite the nation

"THE TELEPHONE HOUR" is broadcast every Monday evening over the N. B. C. Red Network.

HOW CAN HOLES IMPROVE A ROOF?

THAT'S EASY! JUST LISTEN TO THIS ...

The holes (greatly magnified above) in the new Johns-Manville Perforated Asbestos Felts are the result of years of research, experience and testing. As the felts are laid, these countless tiny perforations act as . . .



. . . **"check valves,"** permitting trapped air to escape. They are then sealed by the waterproofing asphalt. Thus, blistering is virtually eliminated. Application is faster, too, and the felts adhere tighter.

Fire protection is also provided. As shown above, J-M Felts remain undamaged under conditions that quickly destroy ordinary felts. Rotproof as well, they assure continued . . .

. . . **low maintenance.** No periodic re-surfacing is needed to protect against the drying-out action of the sun. For example, the roof above is 27 years old . . . *and still going strong!*

The principle back of the new J-M Perforated Asbestos Felt is the same used so successfully by expert waterproofers who employ an open-weave fabric in connection with membrane waterproofing jobs.

If you aren't familiar with the many advantages of this important new J-M advance in roofing, write for details. At the same time, ask for specification data on the many styles and types of J-M Built-up Roofs. Johns-Manville, 22 East 40th Street, New York, N. Y.

JM JOHNS-MANVILLE
Smooth-Surfaced
ASBESTOS BUILT-UP ROOFS

THE ROOF WITH THE SAFETY FACTOR

HOLOPHANE HIBAY REFLECTOR (500-1500 WATTS)

NEW
Built for Today

READY
No Critical Materials

RIGHT
for Efficiency Permanence, Safety

Today, Planned Lighting does its part in the fight for greater speed. With eyes working harder, working longer and under nervous tension, this new Holophane Unit is a timely aid to defense. It accelerates production schedules and reduces costly errors.

The Holophane Hibay Unit No. 990, illustrated here, is one of four new reflectors each with a different light distribution for uniform results under varying mounting conditions. The fact that these reflectors were designed and produced within the restrictions of the emergency is a tribute to Holophane research and engineering skill.

STUDY THESE ADVANTAGES:

1. Uses no critical defense materials
2. Standard Holophane construction . . . sturdy as a Cranelite
3. Traditional Holophane efficiency, permanence, safety
4. No wattage limitations—maximum 1500 watt incandescent or 400 watt Mercury
5. Common-sense high bay light distribution for high mounting

LOWER COST—FASTER SHIPMENT

INVESTIGATE *how conservation of materials, of power and of men can be advanced in* your *plant by the installation of new Holophane Hibay Reflectors. Write for details. No obligation.*

Holophane
COMPANY, INC.
Lighting Authorities—Since 1898
342 MADISON AVE. NEW YORK CITY
THE HOLOPHANE CO. LTD. 215 Yonge St. Toronto, Canada

MANUFACTURERS' DATA WANTED

RALPH C. WYATT, *Chief Engineer,* Engineering & Construction Division, Department of Finance, Commonwealth of Kentucky, Frankfort, Ky. (Data for complete A.I.A. file, data for drafting room, samples, data for building construction.)

A. A. HORWITH, *Chief Mechanical Engineering Draftsman,* Construction Engineering Department, N.A.C.A., Langley Field, Virginia. (Data for complete A.I.A. file, and Data Sheets for drafting room use.)

REV. GILBERT WINKELMANN, A.I.A., Department of Architecture, St. John's University, Collegeville, Minn. (Samples for building materials exhibit.)

THE MART

ARTHUR I. MACDONALD, *Architect,* Stony Hill Road, R.F.D. No. 1, Springfield, Mass., is disposing of his architectural library, has a number of books for sale. Included in his collection is a complete file of the White Pine Series of Architectural Monographs.

CARL C. WOLSDORF, 5177 Ralph Ave., Cincinnati, Ohio, has the following copies of PENCIL POINTS for sale: 1937—June, November, December; 1938—January to December; 1939—January to August.

PERSONALS

WILLIAM T. HERZOG, *Architect,* has moved his office from 238 S. Maple Ave. to 715 Ontario St., Oak Park, Ill.

ARTHUR DEIMEL, *Architect,* formerly of the firm of Scholfield & Deimel, New London, Conn., has opened his own office in the Mercer Building, that city.

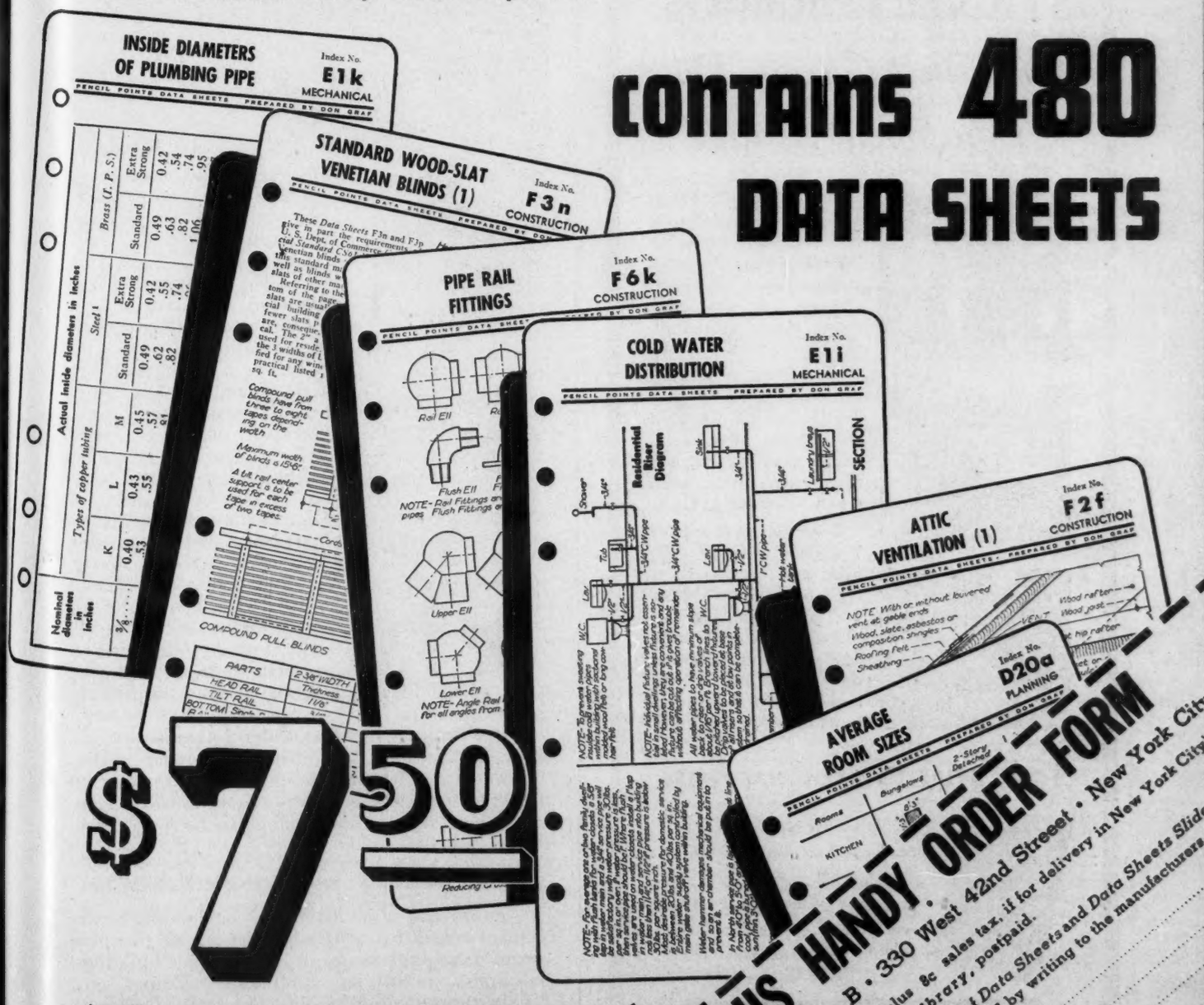
PAUL ROBINSON HUNTER and WALTER REICHARDT have announced the dissolution of the firm of *Hunter & Reichardt,* Architects. They will continue the practice of architecture independently, sharing offices at 1103 Architects Building, Los Angeles, Calif.

packed

Hundreds of sheets crammed with that hard-to-locate information—to speed up working drawings and specifications. Don't be without these indispensable data any longer—fill out the order form and mail it with your check now for the most useful architectural reference work ever published.

Each month PENCIL POINTS prints 4 new *Data Sheets*. Your *Data Sheet Library* will grow in value and usefulness every month—all you have to do is to cut these new *Data Sheets* out of PENCIL POINTS each month and file them in your *Data Sheet Library*.

Dozens of prominent manufacturers have had their products *data-ized*. Manufacturers' free sets of *Data Sheets* are identical in format and presentation with the PENCIL POINTS series. Several direct-reading Slide Rules are available. Check coupon for folder giving complete list and how to obtain them free.



CONTAINS 480 DATA SHEETS

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(Offer expires December 31st, 1941)

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☐ Please send me complete list of *Data Sheets* and *Data Sheets Slide Rules* that I can obtain FREE by writing to the manufacturers.

Name .....

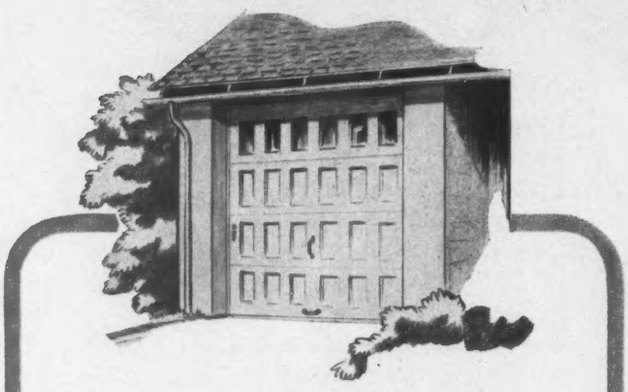
Address .....

City ..... State .....

Architect .....

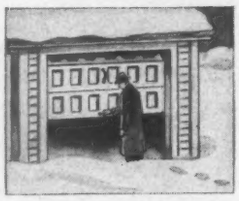
Draftsman .....

Meet Any Garage Specification With A Stanley Hardware Set



STANLEY "Roll-Up"
The Finest Garage Door Equipment Made!

Stanley "Roll-Up" Doors are supplied complete, both doors and hardware. Whether doors are small or large, action is so smooth and easy a child can open them. Heavy springs do the work, with a slight starting pull.



Since these doors travel straight up, the inside of the garage need be no longer than the car, and they open easily, even when snow-banked.

Stock sizes are 8′ wide by 7′ high, 8′ wide by 7′ 6″ high, and 8′ wide by 8′ high, doors either 1⅜″ or 1¾″ thickness. Also furnished 14′, 15′ or 16′ wide, 1¾″ thick, for two-car openings. Doors can be supplied on order to fit unusual openings.

YOUR GUIDE TO GOOD HARDWARE

Stanley Catalog No. 61, giving full details on the complete Stanley Hardware line, will prove handy in preparing your specifications. Write for your free copy. The Stanley Works, New Britain, Connecticut.

STANLEY

HARDWARE FOR CAREFREE DOORS

NEW PRODUCTS

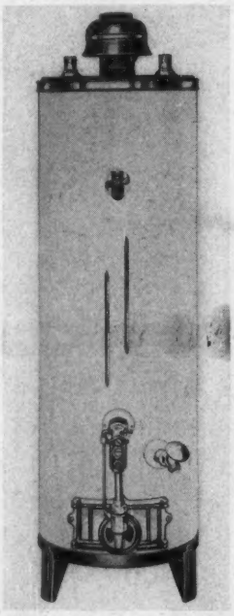
ELECTRIC RANGE STANDARDS

The following approved standards were adopted recently by the National Electrical Manufacturers Association, 155 E. 44th St., New York: Standard 4-24-1941—The dimensions of the clear space in the back of the range to take the plug and cord shall be as follows: height, not less than 8 inches from the floor; width, not less than 8 inches on each side of the center line of the range; depth, not less than 5¾ inches in from the back of the range. The space is provided at the back of the range to permit installing the range against the wall when either a flush-mounted or a surface-mounted receptacle is provided for connecting the range to the supply circuit.

The other standard provides that height of an electric range shall be 36 inches from the floor.

PORCELAIN-ENAMELED WATER HEATER TANK

In view of the scarcity of materials from which galvanized, copper, and other non-ferrous tanks are fabricated, and because of its ability to secure porcelain enameled tanks, the Hotstream Heater Co., 8007 Grand Ave., Cleveland, Ohio, has announced a new Model A automatic storage water heater with porcelain enameled tank.



The new model is an underfired, outside flue, automatic storage water heater, porcelain enameled inside and out. The tank is welded by the Fusion- Welded process. A liner of 1½ inches of Fiberglas is used for insulation, completely surrounds the heater.

The Model A may be had in 15, 20, 30, 40, and 60 gallon capacities for either natural gas or manufactured gas, has an input rating of from 10,000 to 40,000 B.t.u per hour, depending upon capacities.

Other features include combustion separator, air duct, safety pilot, throttling adjustment valve, thermostat. The new heaters are acceptable to FHA, USHA, PBA, and various governmental agencies where non-ferrous tanks have been specified.

MODULATING STEAM CONTROL SYSTEM

An improvement in its No. 40 modulating steam control system for installation on one or two pipe steam heating systems in educational buildings, hospitals, sanitoriums, apartment buildings, etc., has been announced by Major Controls, Inc., Sales Division, 12 Norfolk St., Cambridge, Mass. The model operates in conjunction with the firm's three-point control thermostat which, it claims, consistently maintains inside temperatures within a nar-

row temperature range of plus or minus one degree Fahrenheit.

The manufacturer claims economies by the elimination of excessive pressure on valves and traps in the heating system. The control has no revolving parts to wear out, no parts to oil, and its entire construction is simple, substantial.

RANDOM-TAB SHINGLES

To avoid the monotony of pattern of strip shingles, United States Gypsum Co., 300 W. Adams St., Chi-

cago, has introduced its new USG Random-Tab shingles. In addition to the effect obtained with the irregular lines of these shingles, the four colors in which they are available are enhanced by blended tones on wood-grained textures that accentuate the deep shadow lines. The new shingle is self aligning, self nail-covering, self joint-protecting, and self-randoming, according to the firm. The economy of these heavyweight, four-tab strip shingles is obtained because they may be applied from right to left, or left to right, without any special care in selection of the strips.

WATERPROOFING COMPOUNDS

Four new waterproofing compounds, said to be effective seals for concrete, brick, stone, and other types of masonry, as well as for wood and composition materials, have been announced by Primoid Products Corp., 103 Park Ave., New York. Primoid Standard is a clear, rubber-base liquid which can be either sprayed or brushed on, and penetrates into the material to be waterproofed. It will not crack or peel off, and is not affected by heat or cold.

Dry colors, or colors ground in oil, can readily be mixed with the compound which can also be used as a coating for iron, steel, other metals to prevent corrosion, since it is resistant to oils, acids, other chemicals.

Available in 1, 5, and 10 gallon cans, and 30 and 55 gallon drums. The product has a coverage of 300 to 600 square feet per gallon depending on the porosity of the material being coated.

SPRING BALANCE DEVICE

The Silent-Balance is a combination spring balance and weatherstrip unit which eliminates box frames, sash weights, pulleys and cord, and, where economy in construction is of prime importance, even the window frame, since it provides an air-

Announcement

A SUBSTITUTE for COPPER FLASHING!

CHENEY BLACK FLASHING is a new product identical in shape and form with the original Cheney copper flashing except that it is made of PITCH-ON-METAL instead of copper.

PITCH-ON-METAL, a brand new development, has a ferrous metal core completely enclosed within a heavy baked-on coating of coal-tar pitch enamel. PITCH-ON-METAL has the strength of steel and the flexibility of copper. It is not affected by moisture, lime, or cement mortar and is resistant to most acid conditions.

Our experiments carried on with the government departments at Washington and with the Bureau of Standards definitely convinces us that our new product, CHENEY BLACK FLASHING, will prove a worthy substitute during the emergency.

CHENEY BLACK REGLET is also made of PITCH-ON-METAL and costs of both Black Flashing and Black Reglet are much less than copper.

We are now in production and as soon as possible complete stocks will be available at warehouses of Sheet Metal Distributors throughout the United States.

You can specify CHENEY BLACK FLASHING and CHENEY BLACK REGLET for either defense or non-defense construction as no priorities are necessary.

SPECIFICATION For Private Work

Thru-wall flashing shall be provided below parapet copings, for counterflashing in masonry parapets, where low roofs abut the superstructure, wherever flashing is set between two courses of masonry, and elsewhere as indicated on drawings. Thru-wall flashing shall be placed in the wall with mortar below and on top of flashing, so that a mechanical bond is obtained both vertically and horizontally. All counterflashing shall be bent to shape by the manufacturer. These flashings shall be CHENEY BLACK FLASHINGS and shall be furnished and installed according to the standard specifications of THE CHENEY COMPANY, Ardmore, Pennsylvania.

After all roofing and sheet metal work is completed this contractor shall paint all exposed thru-wall flashing with one brush coat of coal-tar pitch base paint.

SPECIFICATION For Public Work

Thru-wall flashing shall be provided below parapet copings, for counterflashing in masonry parapets, where low roofs abut the superstructure, wherever flashing is set between two courses of masonry, and elsewhere as indicated on drawings. Thru-wall flashings shall be formed with dovetail or undercut sawtooth corrugation spaced three inches apart and shall be placed in the wall with mortar below and on top of flashing, so that a mechanical bond is obtained both vertically and horizontally. All counterflashing shall be bent to shape by the manufacturer.

These flashings shall be made of 26-gauge sheet iron or steel, and shall be factory coated with a baked on coal-tar pitch enamel compounded to proper viscosity with suitable bituminous solvents. Engler viscosity 100 c.c. at 25 degrees centigrade, 275 to 335 seconds, insoluble in Benzol 8% maximum.

After all roofing and sheet metal work is completed this contractor shall paint all exposed thru-wall flashing with one brush coat of coal-tar pitch paint.

The CHENEY COMPANY

ARDMORE — PENNA.

WHEN WE THINK OF
WOOD FLOORS
AS AN ARCHITECT MY EXPERIENCE OF MANY YEARS IN CHOOSING WOOD FLOOR FINISHES HAS PROVED
THAT LIGNOPHOL GIVES COMPLETE SATISFACTION

The surest proof of the value of a product rests upon the results obtained by using it on numerous jobs. That LIGNOPHOL has given longer life—greater beauty and smoother surfaces to many residential, commercial and institutional floors, is a well known matter of record. LIGNOPHOL penetrates the wood, depositing toughening resins, life-imparting oils, which resist molds, fungi, and wood-destroying organisms. It will help to protect your floors against dry rot, cracking, pitting, scuffing and burn marks from rubber shoes.

It brings out the natural beauty of the wood and is suitable for paneling, etc.

Select LIGNOPHOL for floors in residences, schools, gymnasiums and factories and you can rest assured that the job will do you credit. Unlike shellac and varnish, LIGNOPHOL leaves nothing to wear off.

See reproduction of various woods in natural colors in Sweet's Catalog, page 17/40.

LIGNOPHOL
The **ONE** Application
Wood Finish

LIGNOPHOL
Preserves and brings out
the natural beauty of wood

LIGNOPHOL
Leaves nothing to wear off

DEPT. PE-12

L. SONNEBORN SONS, Inc.

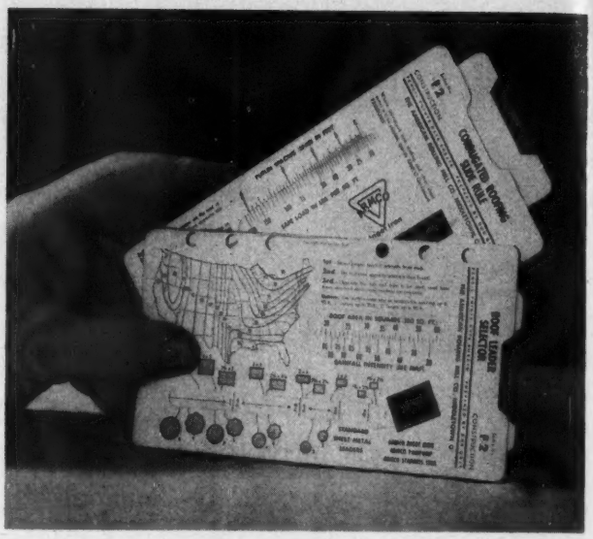
88 LEXINGTON AVE. NEW YORK CITY

sealed metal run for the sash which may be applied directly to the framing studs, according to Holland Weatherstrip Co., Holland, Mich.

The unit consists of a vibration-absorbing spring (of proper length and tension for standard sash sizes) which reduces noise to a minimum, a metal housing, and side compression members acting as weatherstrips. It can also be furnished in a formed unit with weatherstrip integral.

ROOF LEADER SELECTOR

Developed by Don Graf for American Rolling Mill Co., Department 30, 703 Curtis St., Middle-



town, Ohio, is this corrugated roofing slide rule and roof leader selector. Feature of the rule is that it calculates accurately for local rainfall intensity and not, as it often customary, on an eight-inch rate for all localities.

After finding out the rainfall intensity in the locality where the work is to be done, the user sets the slide so that the number of squares in the roof area appears above the rainfall figure; this gives the number of leaders necessary for an adequate installation.

The other side of the rule aids in the selection of purlin spacing on a corrugated metal roof.

HEATING SYSTEM REGULATOR

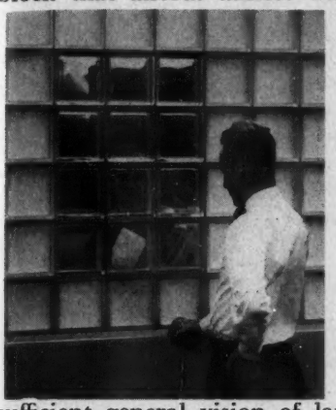
A new, low-priced heating system regulator which controls heating in accordance with outside temperature, and which programs heating according to the hours of activity and outside temperature, has been developed by Marsh Tritrol Co., 600 S. Michigan Ave., Chicago. It offers in one compact instrument all the various controls and switches necessary for completely automatic heat regulation based on outside temperature.

The regulator automatically changes the starting time of the system each morning in accordance with every change of outside temperature. During the day it operates the system often enough and long enough (as guided by outside temperature) to maintain an even, comfortable inside temperature. At night it automatically shuts down the system, in accordance with outside weather.

The unit may be used for multiple occupancy of buildings and even in smaller buildings down to two-family apartments.

TRANSPARENT GLASS BUILDING BLOCK

The development of a transparent glass building block that affords almost window-like vision has has been announced by Pittsburgh Corning Corp., Grant Building, Pittsburgh, Pa. The new block, called the "Vue" glass block, was developed for specific needs where some outside vision is desired through panels of non - transparent glass blocks. The new block permits sufficient general vision of large objects or movements beyond the panel to prevent a "shut-in" feeling sometimes experienced in windowless plants and in factories where obscure glass has been used. The "Vue" blocks can be inserted in panels of conventional glass blocks.



SEMI-SATURATED LINING FELT

The Floor Division of Armstrong Cork Co., Lancaster, Pa., has announced the production of an improved, semi-saturated lining felt said to have high resistance to splitting caused by seasonal sub-floor movements. The increased flexibility of the Lining Felt minimizes necessary rolling. An ordinary linoleum knife is the only tool required for its cutting and fitting.

The fibres in the product are partially impregnated with asphalt, and linoleum paste can penetrate it only deeply enough to assure a maximum bond. The company states that the new felt offers increased resistance to disintegration and bunching when installed over floors subject to severe foot traffic or the constant rolling of office furniture.

DECIMAL EQUIVALENT WALLCHART

A new giant size decimal equivalent wall chart, 26 by 39 inches in size, is available from The Frederick Post Co., 3650 N. Avondale Ave., Chicago, Ill. The chart is printed in large heavy type, 1¼ inches high, which can be easily read 50 feet away. It is printed in two colors (red and black on a white background). The chart brings all the equivalents from 1/64 to 63/64 within easy reading distance of the draftsman.

COPPER FLASHING SUBSTITUTE

To aid the building industry which will be prohibited from using sheet copper for flashing after December 31, The Cheney Co., Ardmore, Pa., has developed a new flashing metal known as Pitch-On-Metal. By using a ferrous metal core and completely enclosing it in a baked-on, coal-tar pitch enamel, experiments have shown that the results obtained were extremely satisfactory.

Tests led to the firm's adoption of Pitch-On-Metal for the manufacture of thru-wall flashing. After December 31 the firm will make flashing of copper for government use only, and will make flashing of Pitch-On-Metal for private and government construction use. The metal can be furnished without priorities for defense and non-defense construction.

Prevent
"Sleeping Car Windows"
with Laux Rez

TRADE MARK REG. U. S. PAT. OFF.

PROTECT THE HOUSES you build against the vexatious and destructive binding, swelling and warping that beset ordinary sash, doors, millwork, etc. . . . TREAT WITH LAUX REZ, the scientific sealer and wood preservative.

Applied in the shop or on the job, this modern synthetic resin sealer penetrates into the wood cells, seals out destructive moisture, controls dimension and grain raise.

Today, many government projects are requiring this treatment as low cost "life insurance," and the growing practice in jobs, large and small, is to specify this inexpensive LAUX REZ treatment.

REZITING—Industrial Preservative Wood Treatment.

FREE to manufacturers of sash, doors, plywood, and other wood products . . . a descriptive brochure of Laucks complete series of low-cost wood treatments for "plant" application . . . among them water-repellent, toxic preservatives, that meet requirements of National Door Manufacturers Association and Western Pine Association. Write today to your nearest Laucks office.

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By ELLIS AND SWANEY

It takes the bunk and mystery out of the subject and, instead, tells you, plainly, the principles, possibilities and simple working plans for starting this fascinating hobby. Shows how to grow plants in water, sand or cinders—how to build the simple equipment you need—complete directions for tending the plants—how to make your own nutrient solutions with a few cents worth of chemicals.

155 Pages, 60 Illustrations, $2.75

Reinhold Publishing Corp., 330 W. 42nd Street, New York

THE MIRACLE OF DEFENSE CONSTRUCTION

by Frazier Hunt

FOUNDATIONS FIRST. *Before the airplane hangar (right) could go up, the hard-working bulldozer (above) had to dig up and level out the foundation. The bulldozer, with its tractor tread and colossal roar, is the building industry's private "tank."*

NOTE TO READERS:

The article reprinted here appears, as a Johns-Manville paid advertisement, on pages 121 and 122 of the December 13th issue of the *Saturday Evening Post*. It is one of a series by well-known writers, designed to help inform the public of the indispensable part American Industry is playing in our National Defense Program.

Because the spotlight of defense publicity has been on tanks, guns, ships and planes, too few people are aware of the miracle of construction which had to precede the production of these defense materials. Factories had to be planned and built. Workers had to be housed. Roads, bridges, air fields, fortifications, bases and a hundred other building jobs had to be started from scratch and completed "yesterday."

How this great building industry, recovering from the worst depression in its history, dug in and achieved the impossible is here recounted for the first time. It is our sincere hope that in presenting this story to millions of readers we are making a contribution to the entire construction industry and to each individual member of it.

Johns-Manville

AMONG THE UNSUNG HEROES of America are the "bulldozers"—those giant machines which, like faith, can move mountains.

The whole story of American preparedness starts with those snorting monsters and with men with blueprints and steam shovels, cement mixers, pile drivers, and the thousand and one other tools that are used on any kind of a building job.

Because bombers don't grow on trees. And tanks don't bloom on rose bushes. And you don't dig TNT out of the ground as you do potatoes. All those weapons are made in great factories, giant plants—in buildings that have to be planned by engineers and architects, and built by carpenters, riveters, welders and roofers, working from sunup to sundown.

Before the tank, before the bomber, before the army, had to come the bulldozer-operators, the masons, the steel workers, the electricians, the plumbers, the painters and the whole construction gang . . . And what an almost inconceivable number of buildings are needed for National Defense! Around 1400 separate housing units in an average cantonment; close to a thousand separate buildings in a powder factory; hundreds of sheds and storage bins at a Navy Yard; houses for the workers near many new plants—ground to be cleared, streets to be laid out, roads built, water mains installed, whole cities built from the ground up. What *is* the construction business? Brother, it's everything you *don't see*—multiplied by ten! You see the tank on the ground or the plane up in the air, but if the construction industry hadn't done *its* job, there wouldn't *be* any tank and there wouldn't be any plane, either.

To realize how the building industry really *has* performed miracles, you must realize that this industry had to start from scratch. Particularly was this true of those architects and large construction companies which, during the great American building era of the twenties, had sent beautiful edifices of steel, stone and cement soaring high into the sky. These builders of great new cities, of office buildings, of mammoth factories, of power plants, of bridges and transportation arteries that were the wonder of the world—these builders and the architects, designers and engineers had faced a famine since 1930. The genius was there. The will to build was there. But only through digging deep into their bank accounts had they been able to keep even a skeleton organization together. Only the courage born of free enterprise could have sustained them. About all they had left was one shirt to their backs . . . Yet these same men are performing the miracle of defense construction for America today.

These men might well have said, "Give us a year to get ready. Our staffs are scattered, our equipment rusty." But there wasn't any year. THE TIME WAS NOW!

The Building Materials Dealer

It wasn't only the big boys who rolled up their sleeves and went to work, either. The local building industry responded, too. The building materials dealers, many hard hit by the depression, instantly made their services available for National Defense housing and other construction. They did this often at a sacrifice because they were already short of materials for civilian needs (that's you and me). Despite the fact that building materials manufacturers have been working their plants 24 hours a day, seven days a week, the dealers are finding it increasingly difficult to furnish supplies with the speed the public has been educated—up to now—to expect.

These smaller companies have shown typical American initiative in meeting their difficulties despite delay in getting materials and shortage of skilled workers. They are particularly deserving of sympathetic understanding on the part of the American public at this time, and it is certainly to their credit that they are not only finding ways around their present difficulties, but are also planning for the future. For these are the men on whom Mr. and Mrs. Homeowner, U. S. A., must depend for the type of housing which will express the true American way of living when peace has come.

We writers and talkers are too deep in the forests of finished products that American genius has built, to be able to see the individual trees. We forget, sometimes, that Uncle Sam didn't furnish the bulldozers and the thousand and one necessary tools when

(*Continued on next page*)

This is the sixth of a series of advertisements sponsored and paid for by Johns-Manville. For more than 80 years this company has been serving America's basic industries.

How indispensable these industries are to the American Way in time of peace is generally recognized. This series is to help inform the public of the indispensable job these industries are doing in this time of great National Emergency.

Johns-Manville is proud of the contributions its products are making in helping the Construction Industry accomplish "The Miracle of Defense Construction" quickly and at the lowest possible cost.

THE MIRACLE OF DEFENSE CONSTRUCTION

(Continued from preceding page)

the defense rush struck. These tools were furnished by the great and small building concerns and contractors who had kept alive for ten years only through their courage and ingenuity. Someday they knew they would be needed, and needed desperately. That day came when France fell, and America awoke to her peril. Overnight America demanded adequate defense—armies, training camps, guns, tanks, planes, shells, ships, TNT and powder. And when that call to duty came, not one miracle occurred, ***but a thousand!*** In a year—in two at the most—the builders HAD to do what Germany had taken seven, in some cases ten years to do.

And they did it! They are saving America by literally building a NEW America. They have conquered Time—they have laughed at Fate. They are winning! Today the bombers and the tanks and the big guns are rolling out of the factories which these men—these builders of the NEW America—have built.

The other day I stood on a spot where for a hundred years tall corn had grown. It was the heart of the broad Corn Belt of this rich land of ours—a single plot of 22,000 acres lying between the Kankakee and the Des Plaines Rivers, a few miles out of Joliet, Illinois. In this single great triangle, where for generations 146 Illinois families had grown corn, were all the basic requirements for a giant plant to make the high explosives for our bombs, shells and torpedoes. Here was plenty of water, excellent transportation, hard roads, safety from enemy bombing attacks and rolling land for protection against inside explosions.

One Miracle Among Many

So *this* was the spot for "the miracle of the corn fields." The construction company which did the job asked few questions when the government gave them the nod. Quietly they shipped in their key men, and then added workmen at the rate of 100 a day. The bulldozers grunted, the cement mixers groaned, the men sweated and swore—but where the tall corn had grown, there now sprouted chimneys, pipelines, buildings and shops. The sum total of these adds up to one of the biggest, most efficient and safest TNT plants in the world—all done ahead of schedule. That's easy to write about, but these men on the job, just as a starter, had to build 51 miles of standard-gauge railroad, with 117 loading and unloading stations; 44 miles of heavy-duty roads and 80 miles of ordinary highways; 85 miles of pipelines that ran from 4 inches to 42 inches—with 15 miles of sewage pipe thrown in for good measure (and good sanitation). Before this mighty TNT plant was completed, the construction company had put up 460 separate buildings.

The building of this plant is but one example of the job being done. So vast, so widespread is our defense construction a writer despairs, in a short article like this, of ever getting across to you its true magnitude. Maybe this would help: In the first nine months of 1941, we have used enough concrete in airport pavements alone to equal almost all the concrete used in road building in these 48 states in the same period. To pave these urgently needed airports, we have laid enough concrete to build a single-lane transcontinental highway from Charleston, South Carolina, to Los Angeles and back again East as far as Indianapolis, Indiana, or more than 5,000 miles.

America Does It Again

The blue eyes of hard-working, super-efficient, 49-year-old Brigadier General Brehon Somervell, Chief of the Construction Division of the Army Quartermaster Corps, twinkled with pride when he talked to me in his Washington office about the all-important part the building industry is playing. "You can't exaggerate what has already been accomplished," he said to me. "It's like the statement made by the great General Goethals about the building of the Panama Canal, *'Birds were singing in the trees one week and ships sailing by the next.'* Americans, working for America, have done it again! The whole building industry has come forward in unbelievably fine shape . . . The results speak for themselves. The efficiency and patriotism of these splendid men have been inspiring. They have tackled what looked to be impossible jobs and they have driven them through, and in many cases ahead of schedule. Labor, too, has, on the whole, been fine . . . We have almost completed our first great program and are deep in our second now. I can't say too much for these men of this fundamental industry."

I don't want to bog you down with figures, but it is fascinating to take hold of one or two items involved in the single business of Army-cantonment construction. We've used enough lumber in our Army camps to nail a 12-inch plank, 1 inch thick, eight and three-quarters times around the world. In building camps and Army cantonments alone we've employed more than 490,000 workers, and a billion dollars' worth of lumber. A score and more of our great civilian building contractors simply rolled up their sleeves, spat on their brawny hands, and dared bad weather and hard luck in their drive to get finished, in time, camps that would be snug and habitable for our expanding army.

How the Job Was Laid Out

The whole enormous job really breaks up into three separate divisions—and behind each stands the vast civilian building industry, with its trained men, its tools and its high patriotism. The Army & Navy Corps and Bureaus developed their specifications and then turned them over to the trained civilian architects and engineers of the country. These men, with their first-hand knowledge of materials and design, did the original planning. They worked night and day, adapting civilian methods and techniques to the new field of construction necessary to our national defense.

All of them did—and are doing—their work in three main divisions because all military construction was split into three parts. *First:* To the Construction Division of the Quartermaster Corps went the job of building the plants for Army training, and ordnance and soldier supplies. *Second:* To the Army Corps of Engineers went the task of laying out the construction of fortifications, camouflage works and all Army Air Corps projects and bases, including the nine great air bases acquired in the Atlantic from the British and the new Alaskan air fields. *Third:* To the Bureau of Yards and Docks of the Navy went the complicated job of building naval air bases in the Pacific and Atlantic, as well as at home, and the whole varied and multiple tasks of Navy construction, from shipyards to training schools.

Behind each of these three divisions stood, in phalanx, the great building industry. Architects, engineers and contractors furnished the brains and the muscle to drive the nails in our far-flung fortresses of safety. Also, hundreds of our finest construction brains were willingly drafted to serve as reserve Army and Navy engineers and Constructing Quartermaster officers. From the Philippines to Puerto Rico is ten thousand miles; from Dutch Harbor, Alaska, to Samoa, in the South Seas, is roughly five thousand miles. So the picture of our preparedness program covers a canvas five thousand by ten thousand miles square. Over this great expanse of land and sea, American engineers, builders with saw and hammers, contractors with fantastic bulldozers and pile drivers, have swarmed like busy bees.

A billion dollars was assigned to the Engineer Corps of the Army. There were bomber and fighter factories and assembly plants to be constructed, air bases to be rushed to completion . . . Altogether 54 great groups of buildings and bases.

Almost overnight a new base is born; a new pearl added to our priceless necklace of national defense—Guam, Wake, Midway, Palmyra, Johnson—these are a few of the names.

Groups of sturdy, daring contractors banded together on most of these jobs, and they found they had to build from the coral and sand *up*. These new Magellans, modern Vasco de Gamas had to tote everything with them, including drinking water!

People Back Home

And (to get back home) in this year of 1941, despite the heavy demands of war, our builders have found time somehow to build many of the new homes needed in defense areas. Next year they will build more. But many materials that might go into homes will have to go to defense plants, powder mills, air schools and shipyards, and so We the People must be patient. When our nation is fully armed and strong we can go ahead and build our new homes once again, without let or hindrance.

And in the meantime we can also thank our building-material manufacturers for having the courage, good sense and patriotism to keep intact their organizations, their research laboratories and their staffs when the going was tough and uncertain. Many had to draw deeply on their reserves, but when the crisis came and the building industry had to really perform "the miracle of defense construction," it was ready with new products, more efficient production, to tackle *and finish* the job. Once again, private industry had proved it could "take it."

So why should any of us complain if, during this coming year, the great effort and the continued need of turning out vast quantities of war goods leave us short-handed in men and materials for home building? The sacrifice and the temporary hardships will be well worth the cost, it seems to me. For what is a home worth if it be not secure, free and decent?

That's what we're struggling for and arming for, isn't it? And, when we get there, don't forget the defense job had to be done *from the ground up*—that private industry was ready to do it—and that the roar of the bulldozers was the first signal of ultimate victory for our democratic way of life.

This is the sixth of a series of advertisements sponsored and paid for by* Johns-Manville *and designed to tell the American people how indispensable our basic industries are for National Defense.

USG NEWS-FACTS

PYROBAR EDITION

July 1941 Vol. I No. 7

Published by the UNITED STATES GYPSUM COMPANY, 300 West Adams Street, Chicago

Twin Apartment Fires

BRONXVILLE, N. Y. — A spectacular blaze originating at the ceiling of the top floor destroyed the entire roof and gnawed at top floor apartments. At 10:15 the first fireman arrived and by 11:00 o'clock the fire was under control. Gypsum plaster and gypsum partitions were used in this apartment and the fire damage was $15,000.

Across the river in Yonkers less than 3 months later, flames were first noticed by neighbors in the upper floor. The smoke could be seen from all over Westchester County. Framing and partitions were of combustible material and the damage was estimated at $310,000.

BAR-ROOM MIRROR SAVED!

BUFFALO, N. Y.—Grease accumulating around ovens and stoves caught fire in the kitchen of a well-known Buffalo hotel. The kitchen was separated from the bar-room by a 3″ Pyrobar tile partition. The kitchen fire was extremely hot — temperatures much higher than the usual fire test temperatures created a raging inferno which destroyed every useful object in the room and completely demolished the kitchen interior. On the opposite side of the 3″ Pyrobar partition was mounted one of the longest bar mirrors in Buffalo, a great sheet of glass extending horizontally for many feet. Though the fierce fire was only three inches away from the back of this mirror, the glass was not even cracked and the silvering was not damaged in any way!

Ancient Swimming Tank Test Proved Right By 23 Years Use

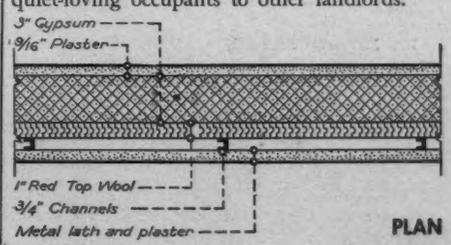
NEW YORK, N. Y.—An inspection by Navy engineers of the reinforced gypsum floor under the swimming tank of the old Hammerstein Theater in 1918 resulted in an acceptance of gypsum construction for Navy buildings in proximity to tide water. Long before the time of Ziegfeld, bathing girls disported in Hammerstein's theater tank for the edification of old-time New Yorkers and out-of-town visitors. The tank was supported on a gypsum floor. Leaks were plentiful and water was splashed over the floor. Navy engineers investigated this slab after 20 years of such use, and on their recommendation many gypsum buildings were constructed around 1918 to withstand really serious moisture conditions. These buildings are in prime condition today—23 years later.

PYROBAR AND RED TOP WOOL MAKE HIGHLY EFFICIENT SOUND-ISOLATING PARTITIONS

NEW YORK, N. Y.—Architect Kenneth Norton, one of New York's best-known apartment house design specialists, has stated that sound isolation is one of the most important problems to be solved in city apartment buildings. In the John Murray House now being constructed at Madison Avenue and 37th Street, Mr. Norton has devised a partition system for sound isolation, utilizing 1″ USG Red Top Insulating Wool Blanket to further increase the naturally high resistance of Pyrobar gypsum tile to the transmission of sound. The complete effectiveness of this newly developed partition is proven beyond doubt by the isolation of construction noises while the building is in progress. Floor finishing machines provide a noise level far above that which would be normally created by a group of celebrating tenants—yet the transmission of this intense sound is satisfactorily deadened by the partition Mr. Norton has devised.

This construction consists of 3″ hollow Pyrobar, against which is applied a 1″ Red Top Insulating Wool Blanket. Against this are ¾″ furring channels anchored at the floor and ceiling but not fastened through the blanket to the Pyrobar in any way. Over the channels metal lath and plaster are applied and on the opposite side of the partition is ½″ plaster on the Pyrobar.

This apartment house will not have vacancies because of noisy tenants driving quiet-loving occupants to other landlords.



PLAN

Pyrobar Gypsum Tile

Pyrobar is the registered trade name for gypsum tiles made by the United States Gypsum Company. Pyrobar Gypsum Tile is used in the construction of non-bearing partitions; furring; elevator, stair and shaft enclosures. A material for these uses must have certain performance characteristics, as follows:

1. **Fire Resistance**
2. **Ease of Erection**
3. **Adaptability to Alteration**
4. **Ease of Attachment**
5. **Economy and Light Weight**
6. **Good Plaster Base**

USG Pyrobar Gypsum Tile completely fulfills every requirement for the construction of non-bearing partitions and furring.

1. Fire Resistance

Gypsum will not burn. It is a rock and cannot burn regardless of the intensity of heat to which it is subjected.

Gypsum is a dry mineral containing 20% of its weight in combined water. When fire or heat attacks these gypsum products the gypsum itself acts as a good insulator and when the heat rises to about 260° F. the combined water begins to release thus increasing the fire resistance or transmission of heat. This resistance continues long after heat reaches 260° F.

Gypsum will not expand when subjected to fire but as the water of crystallization is evaporated it contracts very slightly.

Underwriters Fire Test

A representative test on Pyrobar by the Underwriters Laboratories is contained in Retardant Report No. 378. A 3″ hollow Pyrobar partition with ½″ of gypsum plaster on both sides was subjected to a fire for 2 hours and then submitted to a fire stream test of 50 pounds pressure for 5 minutes. For the last 1½ hours the temperature was approximately 1700° F. At the end of the test the temperature rise on the opposite side of the partition was only 90° F. and no fire, smoke or water had passed through the partition.

2. Ease of Erection

Each Pyrobar unit provides 2½ square feet of wall surface which lays up rapidly. Pyrobar Gypsum Tile are cast in steel molds, assuring true, square edges and accurate dimensions which make it easy to build true, plumb partitions. The light weight of the tiles (see table of weights below) means speedy handling during erection. Pyrobar can be readily cut with a plaster saw to fit openings, to form pipe chases, to allow for conduits, and the cut pieces can be used without waste.

3. Adaptability to Alteration

Alterations are quickly made to meet changing conditions in hotels and office buildings. New openings may be cut in a gypsum tile partition, a section or entire partition may be removed with a minimum of labor, time and inconvenience. In most cases the units removed can be salvaged for other use.

4. Ease of Attachment

Any trim can be nailed with square cut nails directly to Pyrobar Tile, without shattering or breaking it, or trim can be nailed with finishing nails to the usual plaster grounds. For heavier objects, wood nailing blocks are built into vertical joints at proper positions, each block spiked to a tile end as the wall is erected.

5. Economy and Light Weight

Saves Time. Easy cutting and rapid erection of large units, each of which provides 2½ square feet of wall surface.

Saves Mortar. Forty per cent fewer joints as against a wall of equal thickness with only 1 square foot of surface per unit.

Saves Plaster. Twenty per cent less plaster required over the true, even surface of Pyrobar as against plastering over uneven clay tile.

Saves Weight. Twenty-four to 46 per cent less weight per square foot than clay tile of equal thickness, reducing dead load, saving construction cost, steel for support, freight, hauling, hoisting and labor.

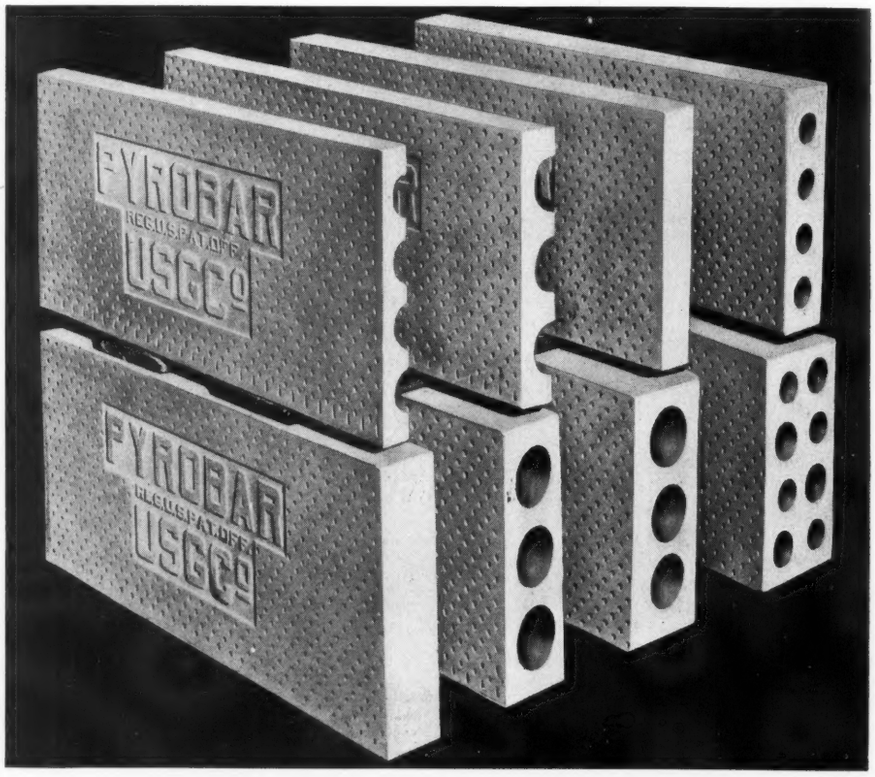
6. Good Plaster Base

In addition to the saving in plaster resulting from the true, even surfaces of Pyrobar, Pyrobar is an ideal base for gypsum plaster since gypsum bonds most readily with gypsum.

Pyrobar Uses

Gypsum tile has been used for partitions and shaft enclosures in fireproof and non-fireproof buildings for over 30 years. The use of Pyrobar Tile Furring, attached or free-standing, provides a permanent surface to receive plaster or other finish.

In addition to the partition and furring tile United States Gypsum Company manufactures a complete line of special shapes for use as structural steel fireproofing. Literature is available on request or see *Sweet's* 4/48.



WEIGHTS OF PYROBAR PARTITIONS

Thickness of Pyrobar	Maximum Ceiling Heights in Feet	Pyrobar in Lbs. per Sq. Ft.	Lbs. per Sq. Ft. ½″ Plaster 1 Side	Lbs. per Sq. Ft. ½″ Plaster 2 Sides
1½″ Split	Furring	4.9	7.9	....
2″ Split	Furring	6.4	9.4	....
2″ Solid	10′-0″	10.0	13.0	16.0
3″ Hollow	13′-0″	10.0	13.0	16.0
4″ Hollow	17′-0″	13.0	16.0	19.0
5″ Hollow	20′-0″	17.2	20.2	23.2
6″ Hollow	30′-0″	19.0	22.0	25.0

A. I. A. FILE NO. 10D

Pyrobar Specifications

A. I. A. FILE NO. 10D

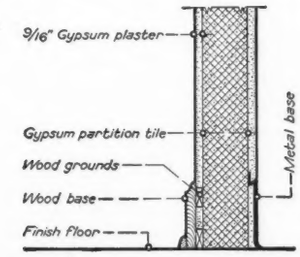
NOTE—Use only the paragraphs which are applicable. Notes in small type are explanatory and are not a part of the Specification. Additional copies of this Specification will be gladly supplied on request—to be used for interlining and crossing out in preparing copy for typing.

1. GENERAL CONDITIONS. The current edition of the A.I.A. General Conditions are part of this Specification.

2. WORK INCLUDED. This Section comprises all labor and materials for the installation of gypsum tile partitions and furring.

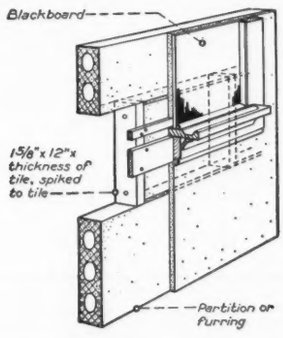
3. MATERIALS. Use Pyrobar Gypsum Tile as manufactured by the United States Gypsum Company. Proportion mortar by volume of 1 part U. S. Gypsum "Block-Set" gypsum cement plaster, to not more than 3 parts of clean, sharp sand. Mix thoroly with sufficient water to produce proper consistency. Do not use Portland cement or lime mortar. Do not retemper mortar. Store gypsum tile and gypsum plaster in a dry location until ready to use.

4. INSTALLATION IN GENERAL. Lay all tile plumb and straight with horizontal beds uniformly level on each course. Break vertical joints. Lay with full flush joints. Build corners and intersections with Pyrobar tile interlocking in log cabin fashion. The first course of masonry in partitions or furring is to be (. . . *gypsum tile for mastic, metal, or wood bases . . . or . . . cinder, cement or hollow clay block for cement bases or other bases requiring water . . .*).



The drawing at the left shows a typical section through the first course of a Pyrobar tile partition with wood or metal base. Since Portland cement mortar does not bond readily to gypsum, a standard cinder, cement or clay tile first course should be used for granolithic or terrazzo bases.

5. WOOD NAILING BLOCKS. The Contractor for work specified in the Section on Carpentry will supply suitable nailing blocks, for the attachment of grounds for fixtures and trim to partitions and furring. Blocks are to be supplied by the Contractor for Carpentry Work and placed by the Contractor for work in this Section. Space nailing blocks 1⅜" thick x 12" x the thickness of the Pyrobar for the support of heavy construction not to exceed 1'-4⅝" o/c. Space nailing blocks 25/32" x 12" x the thickness of the Pyrobar for the securing of grounds to receive ordinary trim not to exceed 2'-6 25/32" o/c. Nailing blocks are to be nailed directly to the end of the gypsum tile with square cut nails.



Consult local practice to determine whether nailing blocks are customarily installed by the Carpenter or by the Contractor who erects the gypsum tile. The drawing shows a typical installation of heavy nailing blocks in a partition or in furring, in this case to support a blackboard. The 2'-6" long tiles are cut in two to produce 15" lengths of tile. With nominal 2" stock this would provide nailing grounds 16⅜" o/c.

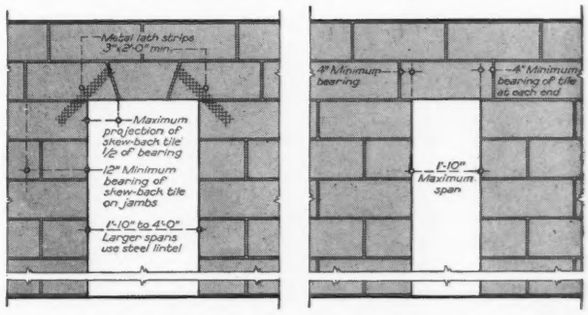
6. PARTITIONS. Start laying tile on (. . . *finished floor for partitions that may be moved, on rough floor for partitions that are permanent . . .*). Wedge top course at ceiling every 6'-0" with wedges cut from Pyrobar and slush the joint with mortar. Lay no partitions of a thickness less than that shown in the following table for the heights of partitions given:

2" Solid	10 ft.	4" Hollow	17 ft.
3" Solid	15 ft.	5" Hollow	20 ft.
3" Hollow	13 ft.	6" Hollow	30 ft.

Corrugated anchors will be placed 12¼" o/c in masonry walls when laid up so that they will project at least 5" into the joints of intersecting gypsum tile partitions.

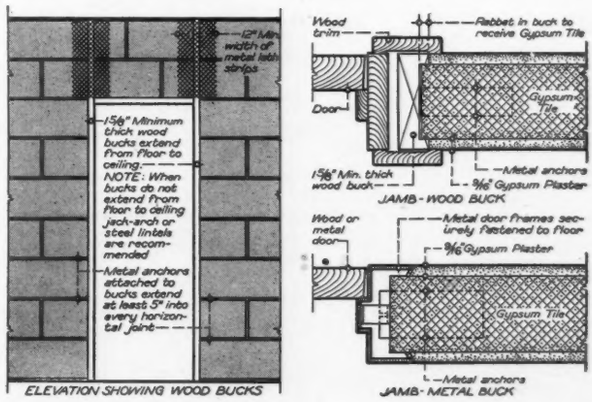
7. FREE-STANDING FURRING. Use (. . . *2" or 3" solid, or 3", 4", 5" or 6" hollow . . .*) Pyrobar gypsum tile for free-standing furring. Start furring on the rough floor. Allow an air space of (. . . *specify distance . . .*) between the face of the rough wall and the back of the furring. Suitable wall ties will be installed at intersections by the Contractor for work specified under Masonry and left projecting from the rough wall. Treat areas of free-standing furring as partitions since they are independent walls and are not anchored to the walls which are being furred except at intersections. At jambs of openings the air space is to be closed by (. . . *returning gypsum tile, or covered with metal lath and plaster under Lath and Plastering Contract . . .*).

8. LINTELS FOR OPENINGS. Where openings less than 1'-10" are detailed without frames or bucks, form a lintel with a single whole tile with end bearings 4"; for openings more than 1'-10" but not more than 4'-0", form jack arches with not less than a 12" bearing for the skew-back tile and do not project skew-back tile beyond the face of the jamb more than one-half of the bearing;


Metal lath strips 3" x 2'-0" min.
Maximum projection of skew-back tile 1/2 of bearing
12" Minimum bearing of skew-back tile on jambs
1'-10" to 4'-0" Larger spans use steel lintel
4" Minimum bearing
4" Minimum bearing of tile at each end
1'-10" Maximum span

for openings over 4'-0" set the metal lintels which will be furnished by the Contractor for work specified under Structural Steel.

Where wood bucks are detailed to extend from floor to ceiling, fill in the area over the opening with gypsum tile anchored at every course on both sides of both bucks. Where metal door frames are specified no lintels are required and the gypsum tile is to be continued over the opening in running bond.


12" Min. width of metal lath strips
15/16" Minimum thick wood bucks extend from floor to ceiling
NOTE: When bucks do not extend from floor to ceiling jack-arch or steel lintels are recommended
Metal anchors attached to bucks extend at least 5" into every horizontal joint
ELEVATION SHOWING WOOD BUCKS
Wood trim
Rabbet in buck to receive Gypsum Tile
Door
Gypsum Tile
15/16" Min. thick wood buck
Metal anchors
9/16" Gypsum Plaster
JAMB - WOOD BUCK
Wood or metal door
Metal door frames securely fastened to floor
9/16" Gypsum Plaster
Gypsum Tile
Metal anchors
JAMB - METAL BUCK

9. CONTACT FURRING. Start furring on rough floor. Install (. . . *1½" or 2"* . . .) split furring tile where required by the drawings. Securely anchor furring in contact with the rough construction by means of 10d steel cut nails driven into the rough masonry joints not more than 2'-0" o/c horizontally and vertically to a penetration of 1½".

The work of installing gypsum partitions and furring is interdependent with a number of other trades. As a check list for this other work, the following paragraphs are suggested for inclusion under their proper sections.

Under Carpentry

WOOD BUCKS. Wood bucks in gypsum partitions must extend from floor to ceiling. Use not less than 1⅝" actual thickness of material for wood bucks. The width of material for bucks must be exactly equal to the total thickness of the tile and plaster construction. Either rabbet bucks to receive the ends of the tile or use material equal to the thickness of the tile only with ½" grounds nailed to the sides with a projection beyond the back of the buck not less than ¾" to form a rabbet for receiving the tile ends. Provide wood bucks with corrugated anchors nailed to the buck so that the anchor will extend at least 5" into every horizontal gypsum tile joint. Set all wood bucks in advance of the partition or fireproofing work.

TRIM. Furnish and install nailing blocks in gypsum tile partitions and furring where required. Cooperate fully with the Partition Contractor to provide suitable nailing for grounds for the attachment of trim or fixtures as specified in Paragraph 5 of the Section on Partitions and Furring.

Under Hollow Metal

METAL DOOR FRAMES. Level and shim metal door frames and keep frames in alignment by adequate bracing during the construction of the gypsum tile partition. Secure frames to rough or finished floor with suitable bolts. Provide frames with corrugated anchors attached to the frame to extend 5" into every horizontal joint of the gypsum tile. Recheck frames for plumbness after tile is in place.

Under Structural Steel or Miscellaneous Iron

LINTELS. Provide structural lintels of section as detailed on the drawings for all openings in gypsum tile partitions or furring which are more than 4'-0" in width. Metal lintels will be set by the Contractor for gypsum tile partitions.

Gypsum tile is not a load-bearing material and large openings with a considerable area of tile above them will require struts from floor to ceiling to support the lintel or the lintel may be hung by anchored rods from the structural ceiling construction. Where openings occur in furred walls, the lintel for support of gypsum will often be a part of the lintel supporting structural masonry lintels. For partitions which are relatively small and which carry a small amount of masonry can be economically formed of flat steel bars having 6" bearing.

Under Waterproofing and Dampproofing

DAMPPROOFING EXTERIOR WALLS. Apply a dampproofing to the interior surface of exterior walls which are to receive gypsum tile contact furring. Use *(. . . specify type, such as pitch coating, paint, mastic, etc. . . .)* as a dampproofing applied according to the manufacturer's directions.

The permeability of masonry walls may require the application of a dampproofing before contact furring is placed. Many thousands of installations of gypsum tile contact furring without dampproofing are on record as completely satisfactory.

Under Lathing and Plastering

METAL LATH. Cover areas of gypsum tile, which are to receive a Portland cement setting bed for ceramic tile, with *(. . . specify type . . .)* metal lath.

Cover all joints between gypsum tile and other types of masonry with metal strip lath not less than 3" wide weighing not less than 2.2 pounds per square yard. Cover that portion of bucks above openings when bucks extend from floor to ceiling with a strip of metal lath not less than 12" wide weighing not less than 2.2 pounds per square yard. Run metal strip lath not less than 3" wide x 2'-0" long weighing not less than 2.2 pounds per square yard diagonally on both sides of openings with skew-back arch lintels. Cover chases cut in gypsum tile to receive conduits, pipes or other services with a strip of metal lath weighing not less than 2.2 pounds per square yard.

PLASTERING. Apply gypsum plaster on gypsum tile in accordance with the American Standards Association Standard Specifications for Gypsum Plastering.

Under Electrical Work

CONDUITS. Place conduits so as to allow for the full thickness of plaster being applied. Keep conduits back at least 12" from the jambs of openings so that proper bearing of lintels can be obtained.

Under Masonry

ANCHORS. Where corrugated anchors are required for the anchoring of gypsum tile, provide and install suitable corrugated anchors in such a manner as to allow 5" projection into the joints of the gypsum tile.

UNITED STATES GYPSUM PRODUCTS

ACOUSTIC MATERIALS. Tile, metal tile, board, and plaster products for controlling reverberation and quieting sound.

INTERIOR PLASTER AND STUCCO. Fifty varieties including the famous Red Top Plaster, for every building need.

MASON'S AND FINISHING LIME. Quick or Hydrated.

PAINT. New Principle interior paints which are quick drying, light reflecting, free from objectionable odor, cleanable. They have high coverage and high opacity. Also primer and cold water paints and paints for exterior and interior masonry surfaces.

PLASTER BASES. A complete line of standard metal laths, gypsum lath, metal accessories and light weight economical Pyrobar gypsum partition tile.

ROOFS, FLOORS AND PARTITIONS. Pre-cast and poured gypsum slabs, and ribbed steel decks for roofs and floors. Gypsum block for partitions and fireproofing.

SHEATHING. An insulating board type and Gyplap the fireproof gypsum board sheathing.

SHEETROCK. Fireproof Gypsum panel material for dry wall construction to receive paint, wall paper or any other decoration. Also available predecorated.

SHINGLES. Asphalt and asbestos cement shingles in a variety of styles and colors.

SIDING. Asbestos cement siding in a variety of colors, also with self-cleaning Glatex surface.

THERMAL INSULATION. Board, blanket, loose fill and reflective types.

TRUSSTEEL STUDS. A system of light weight hollow steel partition framing, for speedy erection and non-inflammability.

USG PLASTERING SYSTEMS. Construction methods for applying Rocklath or Metal Lath to wood frame, steel or masonry, to reduce sound transmission and to minimize plaster cracks and joist streaking.

WEATHERWOOD. A panel material combining construction, insulation and sound deadening with interior finish.

UNITED STATES GYPSUM COMPANY
300 West Adams St., Chicago, Ill.

U S

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USG NEWS-FACTS

ROCKLATH EDITION

Aug.-Sep.-Oct. Vol. 1 No. 8-9-10

Published by the UNITED STATES GYPSUM COMPANY, 300 West Adams Street, Chicago

Bureau of Standards Releases New Fire Test Results

1-HOUR RATING FOR PLASTER AND PERFORATED GYPSUM LATH PROVES HIGH FIREPROOFING VALUE OF ROCKLATH

In the Bureau of Standards Report BMS71, just released, fire ratings for partitions are given, which show that practical constructions *are available* that will meet fire-resistance requirements. The report covers partition constructions representing a wide range of materials and design. The results will enable regulatory bodies to require given ratings for partitions in certain locations. The architect will be able to select a construction of the most advantageous type in a given building or project, to obtain the desired fire resistance at lowest cost.

B. OF S. FIRE RATINGS FOR SOME TYPICAL WALLS

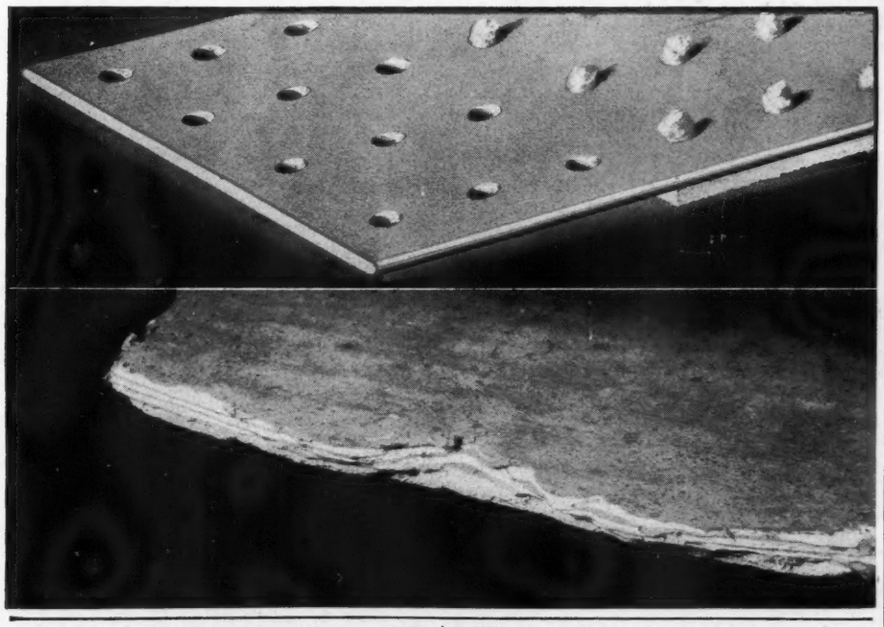
Plaster Base	*Plaster**	*Rating*	*Test No.*
Wood Lath	Gypsum-Sand	½ hour	M, N.
½" Fiber Board 0.7#/sq. ft.	Gypsum-Sand	½ hour	M, N.
⅜" Gypsum Board plain	Fibred‡ Gypsum	1 hour	1, 2.
⅜" Gypsum Board plain or indented	Gypsum-Sand	¾ hour	F, et seq.
⅜" Perforated Gypsum Board	Gypsum-Sand	1 hour	16 et seq.
Expanded Metal	Gypsum-Sand	1 hour†	L

*Two coats of plaster were applied to the bases given. The fibred gypsum was applied neat; all other coats were proportioned 1:2. The expanded metal and plaster thickness totaled ¾"; ½" of plaster was applied to the other bases shown. †The hose-stream resistance of this construction is inadequate. ‡Fiber in neat fibred gypsum plasters can be wool, sisal, asbestos, or a mixture thereof.

The illustration shows a 16 by 10 ft. partition partly withdrawn from the furnace after a fire endurance test. There have been 147 tests conducted over a period of years. Excerpts from the test summary are given in the table at the left.

The weight of the perforated lath for the partitions having 1-hour or greater fire resistance was in the range of 1530 to 1725 pounds per 1000 square feet. The perforations consisted of holes not smaller than ¾". One perforation occurred in each 16 square inches of board. ⅜" Rocklath conforms to these characteristics. It was found that the ratings were not affected by the joints which can be either butted edge to edge or up to ⅜" apart.

ANCIENT ROCKLATH DEFEATS HURRICANE, FLOOD, TIME



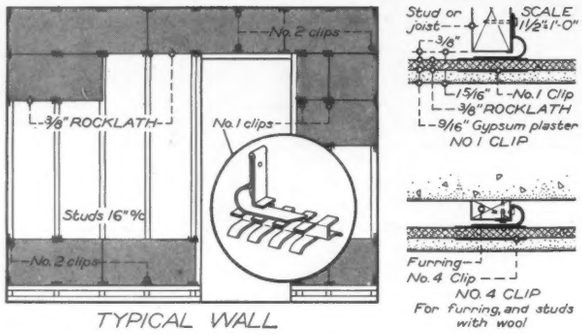
The title for the illustration above could be the well-known USG slogan, "Where research develops better, safer building materials." The lower board is the prototype of the modern Rocklath, taken from a store building in Corpus Christi after 30 years in place. This building survived 3 hurricanes and a flood, yet the sample is hard and the applied plaster is tenaciously and firmly bonded. The upper panel is a sample of the modern Perforated Rocklath—made far superior to even the tough original by unremitting research.

Condensation Protection

Insulating Rocklath (plain Rocklath with a backing of aluminum foil) helps solve the problem of condensation control because it is a highly efficient vapor barrier, as well as efficient thermal insulation. In tests conducted by the Forest Products Laboratory it required 4½ months to pass one gallon of water through 100 square feet of Insulating Rocklath.

Resilient System

Rocklath over Wood Studs, Joists, or Furring



TYPICAL WALL

Description. The USG Resilient System permits Rocklath and gypsum plaster to be applied over wood joists, studs and furring, by means of spring clips to form a "floating" finished plaster surface. In addition to the advantages of Rocklath and gypsum plaster construction, the Resilient System adds 3 unique advantages as follows:

1. **Minimizes Plaster Cracks.** Spring clips take up and absorb structural strains caused by moisture, settlement or vibration.
2. **Eliminates Lath and Joist Marks.** Resilient construction holds the plaster away from the wood framing, providing more uniform temperatures and making streaks less likely to appear.
3. **Reduces Sound Transmission.** Clips dampen vibrations, reducing sounds passing through the resilient construction.

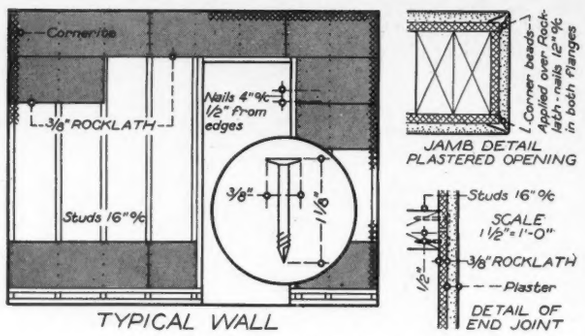
Properties.

Weight of Rocklath, Plaster, and Clips ..... 12.8 lbs. per sq. ft.
Limiting Safe Height ..... 15 feet
Sound Transmission Loss ..... 51.9 db

Reference Literature. These publications are available on request:
USG News-Facts, from January 1941 Pencil Points page 33 et seq.
Sweet's Catalog, Section 9/17, page 16.
Booklet "Spring Cushioned Walls and Ceilings," USG Form No. R-24.

Nail-on Application

Rocklath over Wood Studs, Joists or Furring



TYPICAL WALL

Description. Any of the 3 types of Rocklath applied with nails to wood framing represents the utmost in economy consistent with absolute dependability. Applied as shown above in running bond with vertical joints staggered, the installation is rapidly and economically made. The use of Cornerite at the wall intersections and at the ceiling intersection provides reinforcement. Ceilings may be applied in running bond or by means of the "staggered" system. In the staggered method the joints formed by the long dimension of the Rocklath are broken; joints formed by the ends of the Rocklath boards are continuous and are covered with 4" metal strip lath for reinforcement.

Advantages. All the desirable qualities of Rocklath are combined in this application with rapid erection and greatest economy.

Properties.

Weight of Rocklath and Plaster 1 side ..... 5.5 lbs. per sq. ft.
Sound Transmission Loss ..... 39.0 db
Limiting Safe Height (load bearing) ..... 15 feet

Reference Literature. These publications are available on request:
Folder "Perforated Rocklath," USG Form R-27.
Folder "Rocklath," USG Form R-25.
Sweet's Catalog, Section 9/17, page 12.

What Is Rocklath?

Rocklath is in the form of boards made of gypsum encased in a tough, fibrous covering. Extreme care in the control of production results in a product of known and uniform quality. Rocklath is available 1'-4" x 2'-8" and 1'-4" x 4'-0", 3/8" thick. Three types are manufactured as follows:

Standard Rocklath
Perforated Rocklath
Insulating Rocklath

These products are identical except that the Perforated Rocklath provides a mechanical bond by means of regularly spaced perforations, and Insulating Rocklath has a thin smooth sheet of bright aluminum foil mounted on the unplastered side.

Rocklath has many uses which are briefly described in the panels above. Any lathing requirement can be met by one of the systems.

Rocklath Is Incombustible

Gypsum will not burn. It is a rock and cannot burn regardless of the intensity of heat to which it is subjected.

Gypsum is a dry mineral containing 20% of its weight in combined water. When fire or heat attacks these gypsum products the gypsum itself acts as a good insulator and when the heat rises to the boiling point of water the combined water forms a steam vapor as a barrier on the fire side, thus increasing the fire resistance or transmission of heat. This resistance continues for a long time.

Gypsum will not expand when subjected to fire.

Rocklath Is Inert

Rocklath does not expand, warp or buckle when wet plaster is applied over it; consequently it will not shrink and cause cracks when the plaster dries. It contains nothing to disintegrate or corrode—no pitch, resin or gum to stain the plaster. It is not necessary to wet Rocklath before plastering. Rocklath keeps the moisture of fresh plaster from the frame, which prevents swelling of wood members. Plaster dries quickly, permitting the early application of trim and decoration.

Strong Plaster Bond

In U. S. Bureau of Standards tests, a pull of 6 lbs. per square inch (864 lbs. per sq. ft.) was required to separate plaster from standard Rocklath, providing a safety factor of 144. This is approximately three times the bond of plaster with ordinary lath. Gypsum lath and gypsum plaster being related materials, combine to form a more homogeneous wall finish —in contrast to construction made up of plaster and lath with different rates of expansion and contraction and a different reaction in the presence of water.

Samples of gypsum plaster on Rocklath submerged in water for 5 minutes tested 2.99 pounds per square inch bond, equal to 72 times the weight of the plaster. When the samples had dried they regained their original bond of 6 pounds per square inch.

Ease of Erection

A bundle of boards is easily carried by one man. There are no rough edges or splinters. One piece covers the same area as 9 wood lath and requires half the nails. Boards score and cut without waste. It can be sawed or scored along a straight-edge and broken. Billions of feet of Rocklath are now giving service in buildings of all types in all parts of the United States. Lathers and plasterers are thoroughly experienced in applying it and plastering over it. Either size of Rocklath provides a vertical joint break in intervals that are multiples of 16".

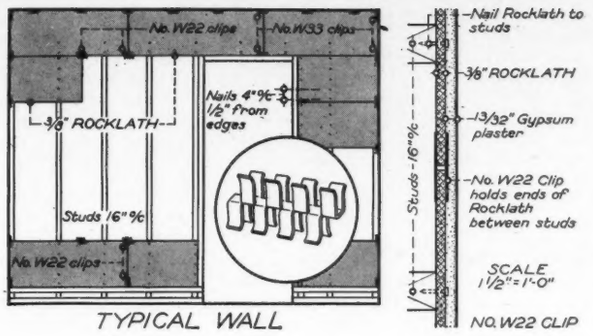
Rocklath Economy

Walls of Rocklath and gypsum plaster cost less than metal lath and plaster, and generally no more than wood lath and plaster.

Because virtually all of the plaster used goes on the face of the lath instead of being pushed through for keys, Rocklath saves plaster. The ease with which Rocklath is applied contributes to its great economy. Rocklath's suction makes plastering easy.

Bridjoint System

Rocklath over Wood Studs, Joists or Furring



Description. In the USG Bridjoint System the ends of the Rocklath units come *between* the supports and *not on them*. The end joints are held by Bridjoint W22 clips. The Rocklath at corners and ceiling angles is not nailed to the framework but is reinforced with Bridjoint W33 corner clips.

Advantages. In ordinary construction the displacement of a stud by moisture, settlement or vibration will stress the weakest point in the lathing, which is the meeting of the end joints over the stud. In the Bridjoint System the end joints fall between studs—eliminating vertical joints at the supports and minimizing cracking of the finished plaster. The placing and alignment of framing need not be so exactly accurate using this system.

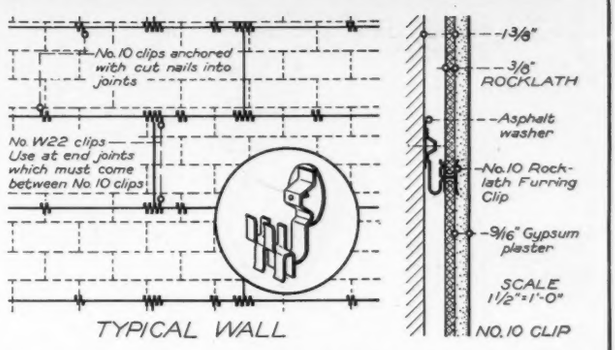
Properties.

Weight of Rocklath, Plaster, and Clips . . . . . 12.8 lbs. per sq. ft.
Limiting Safe Height . . . . . 15 feet

Reference Literature. These publications are available on request:
USG News-Facts, from January 1941 Pencil Points page 33 et seq.
Sweet's Catalog, Section 9/17, page 13.
Folders "Bridjoint Plastering System," USG Form No. R-49, R-54.

Resilient System

Rocklath over Masonry Base


No. 10 clips anchored with cut nails into joints
No. W22 clips — Use at end joints which must come between No. 10 clips
TYPICAL WALL
1 3/8"
3/8" ROCKLATH
Asphalt washer
No. 10 Rocklath Furring Clip
9/16" Gypsum plaster
SCALE 1 1/2" = 1'-0"
NO. 10 CLIP

Description. In the USG Resilient System for Rocklath over Masonry, the No. 10 clips are nailed with cut nails to the vertical mortar joints as close to 16" o/c horizontally as possible. Where the end joints do not coincide with the positioning of a No. 10 clip, a Bridjoint clip is used. This application may be made to any type of masonry. In poured concrete masonry the wall can be drilled for nailing plugs 16" o/c horizontally and vertically to receive the No. 10 clips.

Advantages. The Resilient clip provides a method of absorbing structural displacement strains caused by moisture, settlement or vibration. The introduction of the air space increases the resistance to heat loss and eliminates the danger of disfigurement of the interior plaster decoration. Insulating Rocklath is particularly suited to this application.

Properties.

Weight of Rocklath, Plaster, and Clips . . . . . 12.8 lbs. per sq. ft.

Reference Literature. These publications are available on request:
Sweet's Catalog, Section 9/17, page 17.
Booklet "Spring Cushioned Walls and Ceilings," USG Form No. R-24.

Know all three kinds of Rocklath. In addition to fireproofing and economy, each provides distinctive performance characteristics. Each satisfies in a unique way a wide range of building needs.

PLAIN ROCKLATH. With fibred gypsum plaster this lath is given a 1-hour fire rating by the Bureau of Standards. Plain Rocklath provides a plaster bond of 864 pounds per square foot. Just as good for new construction as it is in remodeling over old walls.

PERFORATED ROCKLATH. The perforations provide a mechanical plaster key which holds plaster in a double grip. One-half inch of plaster over 3/8" Perforated Rocklath gives the wall a 1-hour fire rating.

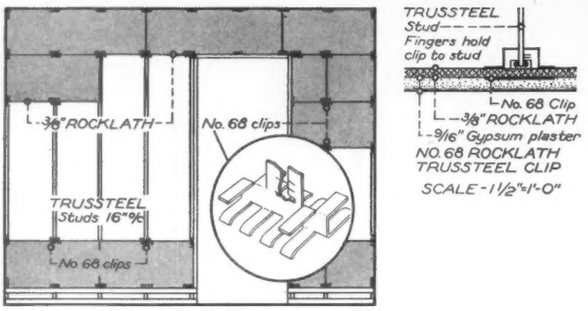
INSULATING ROCKLATH. All the advantages of Plain Rocklath—plus insulation! Insulating Rocklath is the only type of fireproof insulating plaster base available at low cost.

Use it on outside walls. It provides effective resistance to summer heat and winter cold. Insulating Rocklath, properly applied, has insulating efficiency equaling 1/2" of board insulation.

A moisture barrier, too! Insulating Rocklath has been proved by tests to be a better moisture barrier than glossy asphalt paper.

Trussteel-Rocklath System

Using No. 68 Clip



TYPICAL WALL

Description. USG Trussteel-Rocklath System permits the rapid application of Rocklath to Trussteel Studs in non-bearing partitions, by means of the No. 68 clip. The clip is slid over the flange rod and by twisting, it is locked in place.

Advantages. This system has all the advantages of the Trussteel Stud construction plus the economy of Rocklath. The assembly is entirely incombustible, permits the installation of conduits and services of all kinds through the partitions, is extremely light in weight, easily erected without special tools.

Properties.

Weight of Rocklath, Plaster, and Clips ..... 12.8 lbs. per sq. ft.
Sound Transmission Loss, 3¼" Studs ..... 24.0 db
Limiting Safe Height ..... 2" Stud, 10 feet
3" Stud, 16 feet
3¼" Stud, 16 feet
4" Stud, 18 feet
6" Stud, 20 feet

Reference Literature. These publications are available on request:
USG "Trussteel Manual."
Leaflet "No. 68 Rocklath Trussteel Clip," USG Form No. R-58.

Other Rocklath Applications

To Provide an Efficient Plaster Base

Freflote Bridjoint Over Wood Framing. This is similar to the Bridjoint System shown in another panel, except that the Rocklath is held to the studs by means of No. 60 Clips instead of being nailed. This provides a rapid method of attachment and allows limited displacement of the framing from shrinkage or vibration, without transmitting the stresses to the finished wall surface. The substitution of the No. 61 Clip provides a ¼" air space and may be used to provide freedom from lath marks. The following publications are available on request:

Sweet's Catalog, Section 9/17, page 13.
Booklet "Freflote Bridjoint System," USG Form No. R-53.

Freflote Over Wood Framing. This is similar to the Freflote Bridjoint System except that end joints fall over the framing and are nailed thereto instead of between the framing. The following publications are available on request:

Sweet's Catalog, Section 9/17, page 13.
Booklet "Freflote Bridjoint System," USG Form No. R-53.

1¾" Channel Studs (USG No. 600 Studs). This is a resilient system utilizing the No. 6 clip, combining the advantages of Resilient construction with those of Rocklath. The following publications are available on request:

Sweet's Catalog, Section 9/17, page 17.
Leaflet "Steel Frame Construction," USG Form No. R-26E.
Booklet "Spring Cushioned Walls and Ceilings," USG Form No. R-24.

¾" Channel Furring. This utilizes the 6B clip for Resilient Rocklath and plaster finish over ¾" hot or cold rolled furring channels. The following publication is available on request:

Leaflet "Steel Frame Construction," USG Form No. R-26D.

Suspended Ceilings. A method for quickly erecting Resilient Rocklath suspended ceilings over ¾" furring channels, using the No. 5 clip. The following publications are available on request:

Leaflet "Steel Frame Construction," USG Form No. R-26D.
"Spring Cushioned Walls and Ceilings," USG Form No. R-24.

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ACOUSTIC MATERIALS. Tile, metal tile, board, and plaster products for controlling reverberation and quieting sound.

INTERIOR PLASTER AND STUCCO. Fifty varieties including the famous Red Top Plaster, for every building need.

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SHEETROCK. Fireproof Gypsum panel material for dry wall construction to receive paint, wall paper or any other decoration. Also available predecorated to reproduce wood grain.

SHINGLES. Asphalt and asbestos cement shingles in a variety of styles and colors.

SIDING. Asbestos cement siding in a variety of colors, also with self-cleaning Glatex surface.

THERMAL INSULATION. Board, blanket, loose fill and reflective types.

TRUSSTEEL STUDS. A system of light weight hollow steel partition framing, for speedy erection and non-inflammability.

USG PLASTERING SYSTEMS. Construction methods for applying Rocklath or Metal Lath to wood frame, steel or masonry, to reduce sound transmission and to minimize plaster cracks and joist streaking.

WEATHERWOOD. A panel material combining construction, insulation and sound deadening with interior finish.

UNITED STATES GYPSUM COMPANY
300 West Adams St., Chicago, Ill.

USG

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USG NEWS-FACTS

FIRE SAFETY EDITION

November 1941 Vol. 1 No. 11

Published by the **UNITED STATES GYPSUM COMPANY, 300 West Adams Street, Chicago**

DALY CITY MUNICIPAL WATER WORKS

DALY CITY, CALIFORNIA

Feb. 4, 1941

U. S. Gypsum Co.
2501 Harrison Street
San Francisco, California

Dear Sirs: Attention: Mr. R. A. Hartley

On Sunday, Jan. 26, 1941, at 7:15 A.M., Daly City had one of the strongest fires I have ever witnessed in my thirty years of fire service.

We were called to 169 Moltke Street to find a six room frame building that had been burning for some time and was a complete furnace with all the furniture, rugs and hardwood flooring burnt to a crisp in four rooms. After dropping five children from a rear window, we used two streams of water with 120 pound pressure from 2½" lines, and in our inspection after the fire was out, we found aluminum pots, glassware and brass chandeliers melted in solid chunks.

This fire would have been a real disaster, if most other wall materials were used in this building, but the fire was confined to the front four rooms that were covered with ½" recessed edge Sheetrock, made by the U. S. Gypsum Co.

After removing all damaged Sheetrock from walls and ceilings, we found all studs and rafters in perfect condition and not even charred or smoked up as this material kept the flames from spreading to the attic.

I will recommend Sheetrock in home construction as a fire retarding material from now on.

Very truly yours,

A. J. Bodien

A. J. Bodien
Asst. Fire Chief &
Chief Building Inspector

AJB:ad

SHEETROCK CONFINES FIRE THAT MELTED BRASS FIXTURES

The picture and the reproduction of the letter tell their own story. Notice that the studs are not even discolored by smoke and are not in any case charred by flames. The fire which melted aluminum, glass and brass into solid chunks was effectively stopped by the ½" Sheetrock.

Bureau Head Stresses Fire-Resistive Materials

LYMAN J. BRIGGS, the Director of the National Bureau of Standards, has made a statement which summarizes the importance of fire resistive materials in reducing damage from fire. Mr. Briggs says:

"Even within an area for which no legal requirements for fire subdivision apply, the *use of materials* that will contribute a minimum to the severity of the fire and in some degree present a barrier to its spread, is an effective means of fire control.

"In fire-resistive buildings the fire can be prevented from spreading beyond the area in which it originated. In non-fire-resistive buildings the progress of fire can be greatly retarded."

GOOD CONSTRUCTION REDUCES FIRE LOSS

The NBFU has estimated the fire loss in 1939 for dwelling occupancies at 92 million dollars. The total estimated fire loss for all occupancies for 1939 has been placed at 275 million dollars. By the application of proper safeguards the annual fire loss could probably be cut in half.

The fact that fires frequently destroy human life as well as property makes the problem of fire safety doubly important. The U. S. Census Bureau records for 1938 show 7,145 fatalities designated as conflagration deaths.

The first phase of the problem is to prevent the fire from starting—a condition that is beyond the control of the architect except where poor construction (such as defective chimneys) is the contributing cause. The prevention of carelessness by the building occupants has no architectural aspect.

The second phase is to minimize the resulting loss when a fire has broken out. This involves the use of suitable materials and methods of construction which will confine the fire insofar as possible to the point of origin. To keep fire damage to a minimum may also connote the use of fire fighting apparatus as a part of the building equipment in the form of extinguishers, sprinklers, alarms, etc.

Architectural alertness to sound design has, without doubt, prevented the annual loss from being any larger than it is. Good building construction and the use of fire-resistive materials are encouraged by architects, who are responsible for about 70% of the Nation's building. Without the profession's expert knowledge and insistence on quality, the annual fire loss would be many millions of dollars larger.

A fireproof material in a home should do two things, (1) prevent the spread of fire, and (2) prevent damage to the structural supports so that the building will not collapse. To do this, a material must have the following properties:

1. It must not burn—it should not add fuel to the flame.

2. The material must not pass temperatures sufficiently high to set fire to materials on the other side.

3. The material must not expand sufficiently under the fire heat to wreck itself, or its support.

4. These first three should be maintained for the greatest possible time.

Gypsum won't burn; the surface away from the fire stays cool; it does not expand appreciably under heat. Gypsum does all of these things for a considerable period of time. It has great strength; it is easy to apply; it gives rigidity and solidity to the building.

In addition to high fire resistance gypsum products have many other qualities unique to fire-resistive materials. Rocklath, Sheetrock and Gyplap are quickly applied, light in weight, strong, inert, and economical.

Gypsum plaster is not only fireproof but dries rapidly, is adaptable to all types of decoration ordinarily used on plastered surfaces, uniform in quality, and has the plasticity necessary to ease the plasterer's work.

Red Top Insulating Wool is made of incombustible Fibreglas fibers, has great strength and uniformity, eliminates drafts in the framing spaces of wood buildings, and provides both a highly efficient insulation and an effective means of preventing the spread of fire.

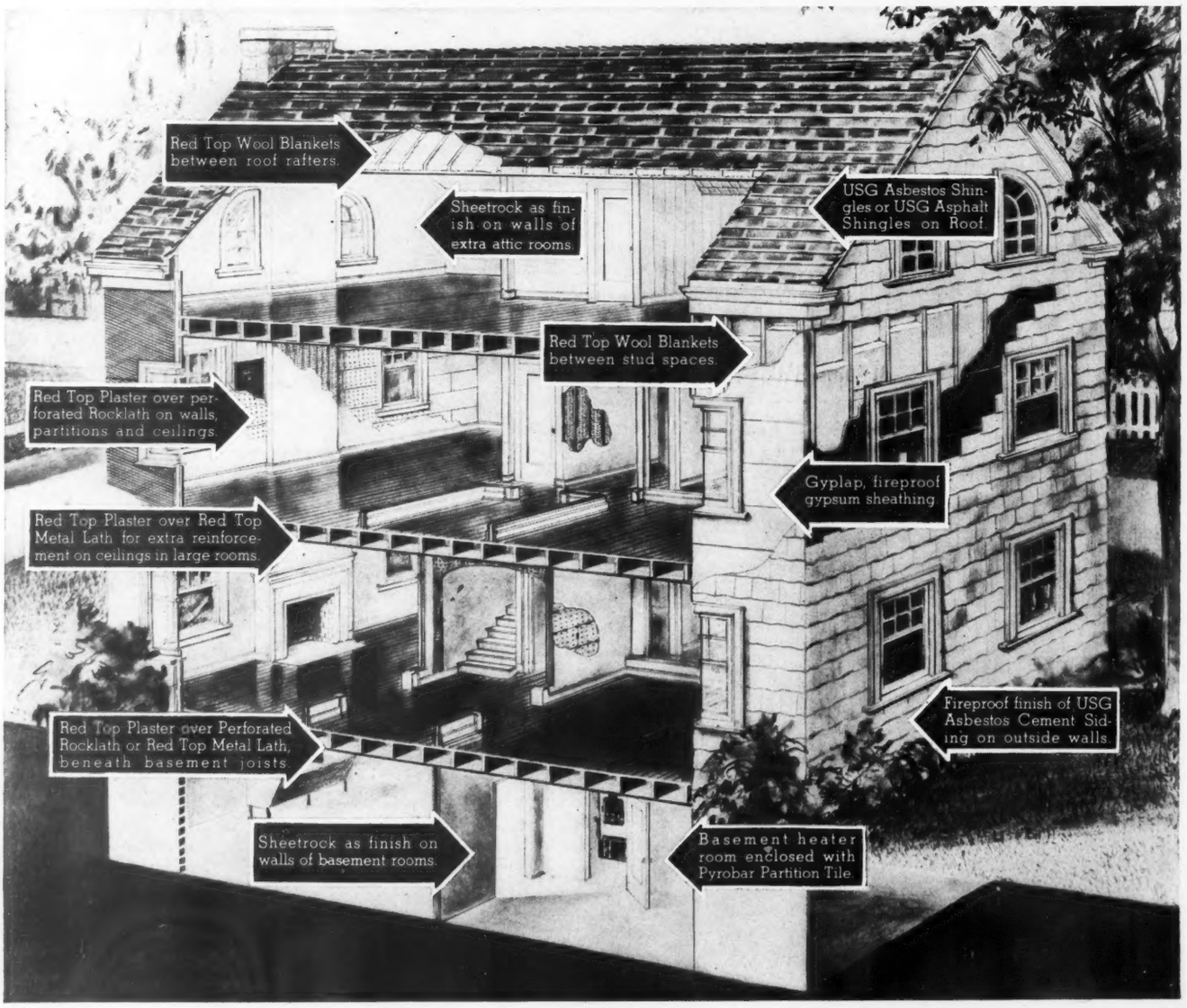
USG asbestos cement roof shingles and sidings minimize the hazard of fire from exposure. Flying sparks or brands cannot ignite these low maintenance materials. Oriental stucco offers another exterior finish material with unlimited design possibilities combined with fire safety.

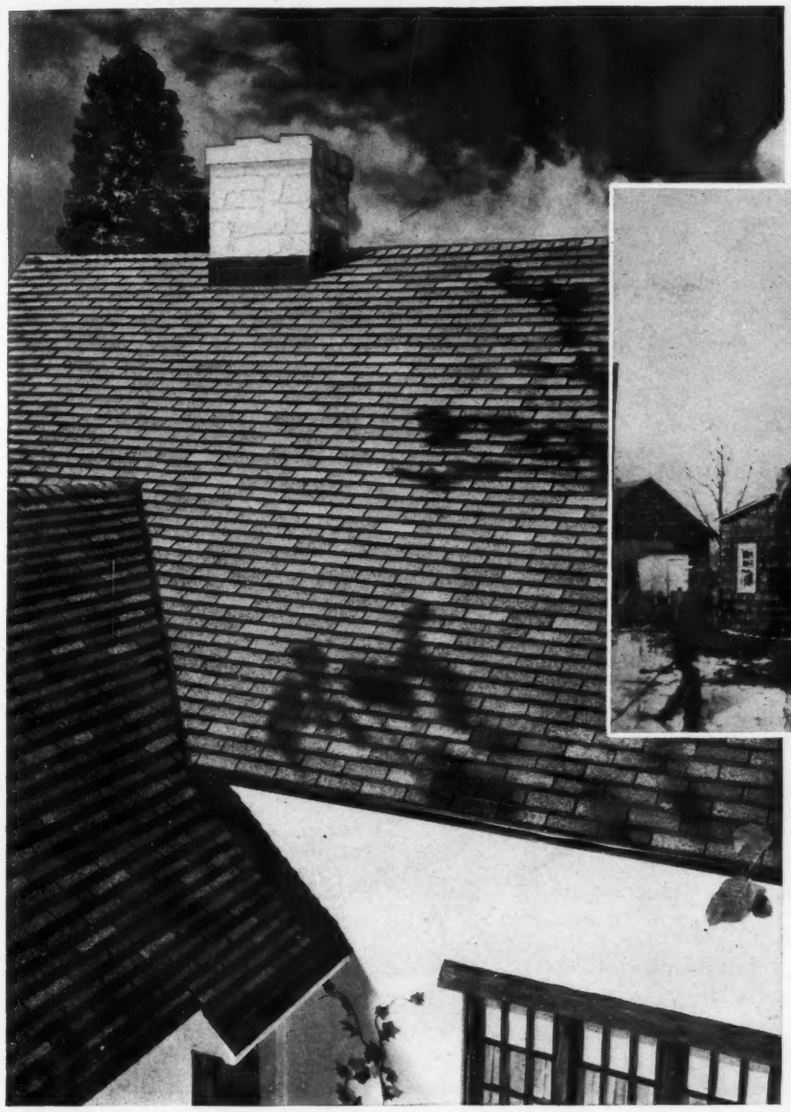
USG acoustic materials—Acoustone, Perfatone and Sabinite are incombustible.

Origin of Dwelling Fires in New York City

Areaways, porches, roofs, etc.	11.3%
Airshafts	0.2%
Attics	1.1%
Awnings	2.7%
Bathrooms and toilets	0.8%
Bedrooms	10.1%
Boiler and furnace rooms	2.2%
Cellars	16.3%
Chimney fires	2.3%
Closets	4.2%
Defective flues	5.3%
Dining rooms	5.5%
Dumbwaiter and elevator shafts	0.5%
Hallways and corridors	2.5%
Kitchens	13.4%
Parlors	7.5%
Partitions, under floors, etc.	1.1%
Storerooms	0.7%
Stoves	10.5%
Vacant floors	1.4%
Miscellaneous	0.4%
Total	*100.0%*

WHERE USG MATERIALS PROTECT AGAINST FIRE


Red Top Wool Blankets between roof rafters.
Sheetrock as finish on walls of extra attic rooms.
USG Asbestos Shingles or USG Asphalt Shingles on Roof.
Red Top Wool Blankets between stud spaces.
Red Top Plaster over perforated Rocklath on walls, partitions and ceilings.
Gyplap, fireproof gypsum sheathing.
Red Top Plaster over Red Top Metal Lath for extra reinforcement on ceilings in large rooms.
Fireproof finish of USG Asbestos Cement Siding on outside walls.
Red Top Plaster over Perforated Rocklath or Red Top Metal Lath, beneath basement joists.
Sheetrock as finish on walls of basement rooms.
Basement heater room enclosed with Pyrobar Partition Tile.



The National Fire Protection Association say that in some states the greatest number of fires from any single cause is attributed to "sparks on roof," illustrating the need of fire retardant roof coverings for dwellings.

At the left is shown a roof of USG Thick Butt textured asphalt shingles. The deep shadows and graining give a dependable rugged appearance in addition to providing fire safety. USG asbestos cement shingles provide even higher fire resistance, freedom from maintenance costs, reduced insurance rates and attractive appearance.

In the picture above is shown a fire which occurred in East Meadow, Long Island, New York, in December, 1935. Note the furious burning of wooden shingle walls—and lack of flame on the asphalt shingle roof.

Side walls may also ignite from exposure unless of non-inflammable material. USG asbestos cement siding or Oriental stucco provide fire-safe exterior wall finish.

The following check list covers most of the elements of dwelling construction which prevent the starting of a fire or which tend to confine it to its point of origin.

CHIMNEYS
- —4″ brick or concrete
- —8″ hollow tile
- —12″ stone
- —flue lining
- —2″ clear to any wood
- —flanged pipe collars
- —cleanouts

ATTACHED GARAGE
- —single opening, automatic closing fire door, sill 12″ above floor
- —1-hour fireproof isolation from house
- —fume vent

BOILER ROOM
- —fireproof isolation from house
- —proper fuel storage
- —15″ minimum clearance from boiler
- —fire door, automatic closing
- —3′-0″ clearance around heater
- —masonry piers or protected columns
- —protect beams and girders
- —smoke pipe clearance and thimble

ROOM WALLS AND CEILINGS
- —fire resistant throughout dwelling

UNOCCUPIED SPACES
- —fire resistant walls and ceilings

FIRE-STOPS (also act as ratproofing)
- —stud spaces
- —furred walls
- —partitions
- —wainscoting
- —stairs
- —shafts
- —around ducts
- —chases
- —between chimney and framing
- —sliding door pockets
- —sills and plates
- —pipe holes

ROOFS
- —lightning arrester on aerial
- —roofing material incombustible or fire resistant
- —incombustible insulation
- —lightning rods

EXTERIOR WALLS
- —incombustible exterior finish
- —incombustible sheathing
- —incombustible insulation

ELECTRICAL WORK
- —follow National Electric Code

FIRE FIGHTING EQUIPMENT
- —provide ladder
- —hand extinguishers
- —sprinklers
- —fire pails
- —fire hose and water under pressure
- —fire alarms

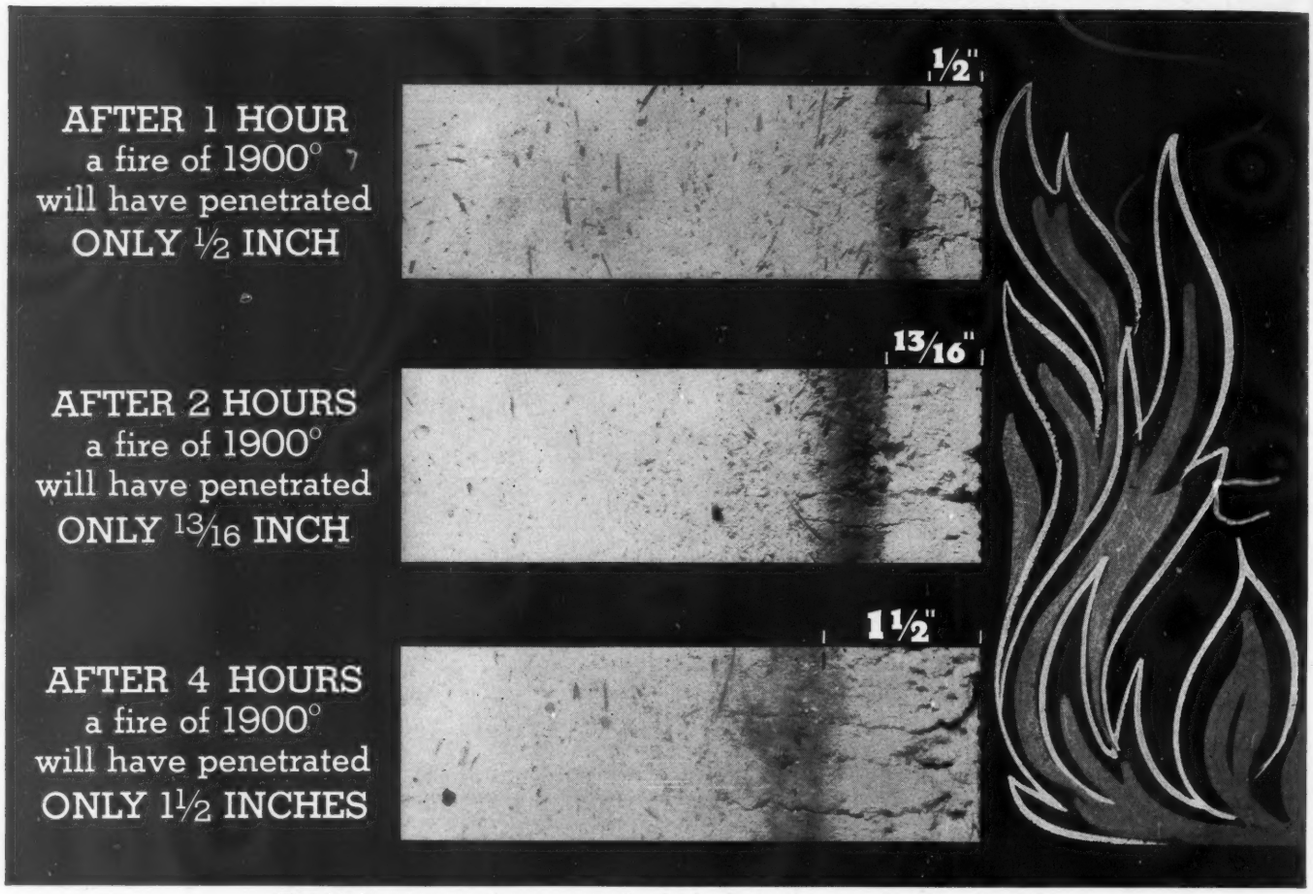
FIREPLACE
- —spark screen
- —20″ hearth
- —fire brick lining

FABRICS (Borax and Boric Acid treatments)
- —awnings
- —draperies

LOCATION OF BUILDING
- —prevailing wind carries sparks
- —far as possible from other structures

WARM AIR PIPES
- —3″ clearance to protected ceilings for horizontal pipes •
- —5′-10″ minimum run from furnace to partition
- —cold air ducts incombustible for 3′-0″ from furnace

GAS PIPES
- —follow NFPA recommendation



The high resistance of gypsum to fire is shown in this test on gypsum block.

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ACOUSTIC MATERIALS. Tile, metal tile, board, and plaster products for controlling reverberation and quieting sound.

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ROOFS, FLOORS AND PARTITIONS. Pre-cast and poured gypsum slabs, and ribbed steel decks for roofs and floors. Gypsum block for partitions and fireproofing.

SHEATHING. An insulating board type and Gyplap the fireproof gypsum board sheathing.

SHEETROCK. Fireproof Gypsum panel material for dry wall construction to receive paint, wall paper or any other decoration. Also available predecorated to reproduce wood grain.

SHINGLES. Asphalt and asbestos cement shingles in a variety of styles and colors.

SIDING. Asbestos cement siding in a variety of colors, also with self-cleaning Glatex surface.

THERMAL INSULATION. Board, blanket, loose fill and reflective types.

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USG NEWS-FACTS

PYROFILL SLAB EDITION

December 1941 Vol. 1 No. 12

Published by the **UNITED STATES GYPSUM COMPANY, 300 West Adams Street, Chicago**

MANY "SUBSTITUTE" MATERIALS AS GOOD OR BETTER THAN ORIGINALS

1. Sheetrock can be substituted for metal on cold air return ducts of air conditioning systems.

2. Roll roofing can be used in place of sheet metal or copper for valleys and flashing of certain parts of a roof.

3. Asphalt shingles can be used on hips and ridges in place of metal—also in place of metal shingles.

4. Blendtex tile and plank can be used in commercial buildings in place of metal ceilings, as can also Sheetrock.

5. Asbestos siding, and stucco, which need no paint, can be used for exteriors to cut down the lead requirements per job.

6. Casein and resin base paint may be used on interior in place of lead and oil paint.

7. Rollbrick siding can be used to refinish the outside of old buildings in place of paint.

8. Sheetrock can be used for shower cabinets in place of metal, if it is thoroughly waterproofed and enameled.

9. Oriental Colored Finish in colors may be used as the finish coat of plaster in place of paint.

10. Sheetrock for interior walls requires a minimum of vital Defense materials, including nails. Its decoration also can be carried out without drawing on critical Defense needs.

11. USG resilient plastering systems using Rocklath may be substituted for metal lath on ceilings of large rooms.

When is a substitute not a substitute? Thousands of architects will be answering this question as the scarcity of vital Defense materials necessitates the search for products which are available to do a given job.

This search will lead many to use old products in new ways and will lead to the acceptance of new products developed during the Emergency. But the easiest and most satisfactory substitutes will be found in materials and products which are neither new developments nor which require them to be used in a different manner than intended. Architects and designers, in specifying and using well-known products for the first time, will discover in countless cases that they are as good or better than the materials habitually specified.

As an example, many architectural offices will discover the advantages of casein and resin base paints for finishing—although these paints have been widely accepted by their professional brothers for a number of years. In the same way, most of the materials in the list at the left will not be substitutions at all to thousands of U. S. architects who have discovered the economy, performance, appearance and installability of the suggested available products.

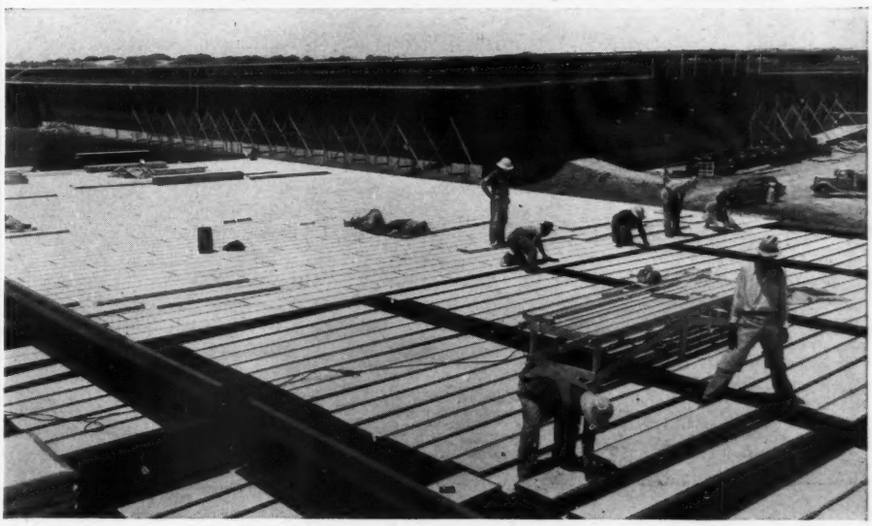
FIRST GYPSUM DECK EVER POURED STILL IN PLACE

In 1902 and 1903 the Ingersoll-Rand Company erected a plant at Phillipsburg, New Jersey. A considerable portion of the plant was covered with a cast-in-place gypsum roof slab.

So far as is known, this slab was the first poured gypsum ever to be erected in the United States. After almost 40 years that part of the original slab which had not been disturbed by alterations is still in place!

Ingersoll-Rand Company have continued to use gypsum roof construction during the many years since this plant has been operating. Last September a new unit was installed with a poured gypsum deck—a striking testimonial to the satisfaction and service rendered by gypsum slab construction.

MILLIONS (of feet of USG Plank) FOR DEFENSE!

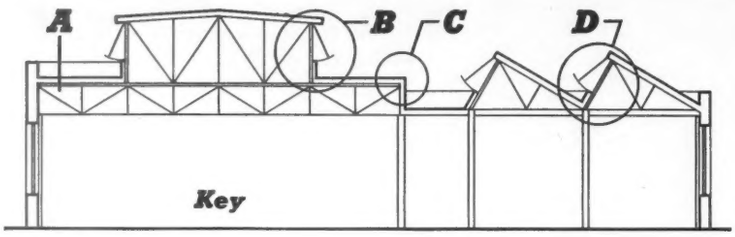


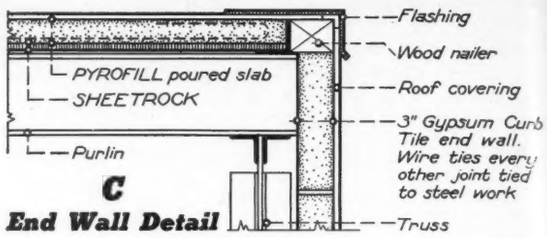
CHICAGO, ILL.—Astronomical figures are no novelty to Americans who are keeping up to date on Defense production. Probably no one will be surprised that United States Gypsum Company have already sold over 10 million square feet of USG steel roof deck in the current year. One single installation now being erected here in Chicago amounts to almost 600,000 square feet—an area of over 13 acres of roof deck.

In the photograph above we see workmen installing USG metal-edge gypsum plank on a Defense project in San Antonio, whose size dwarfs even the Chicago plant. In this Texas depot supply warehouse the United States Gypsum Company are supplying over 1 million square feet of plank—over 26 acres!

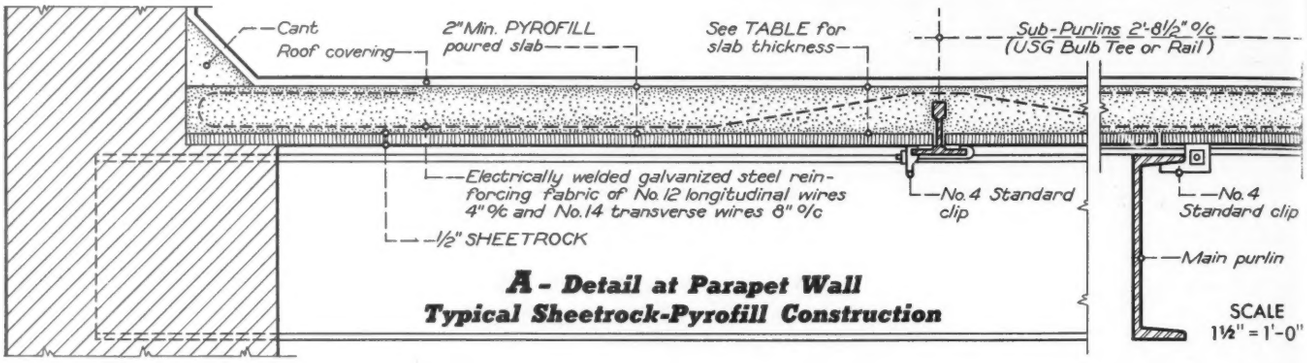
The USG steel deck construction, however, refuses to be counted out in the contest and has just scored a new "biggest" by being specified on a plant requiring 2½ million square feet—almost 1/10th of a square mile!

In addition to these two types of construction the other USG deck products—reinforced gypsum tile and Pyrofill poured gypsum deck—are playing an important part in the construction of America's buildings during the critical Defense period.

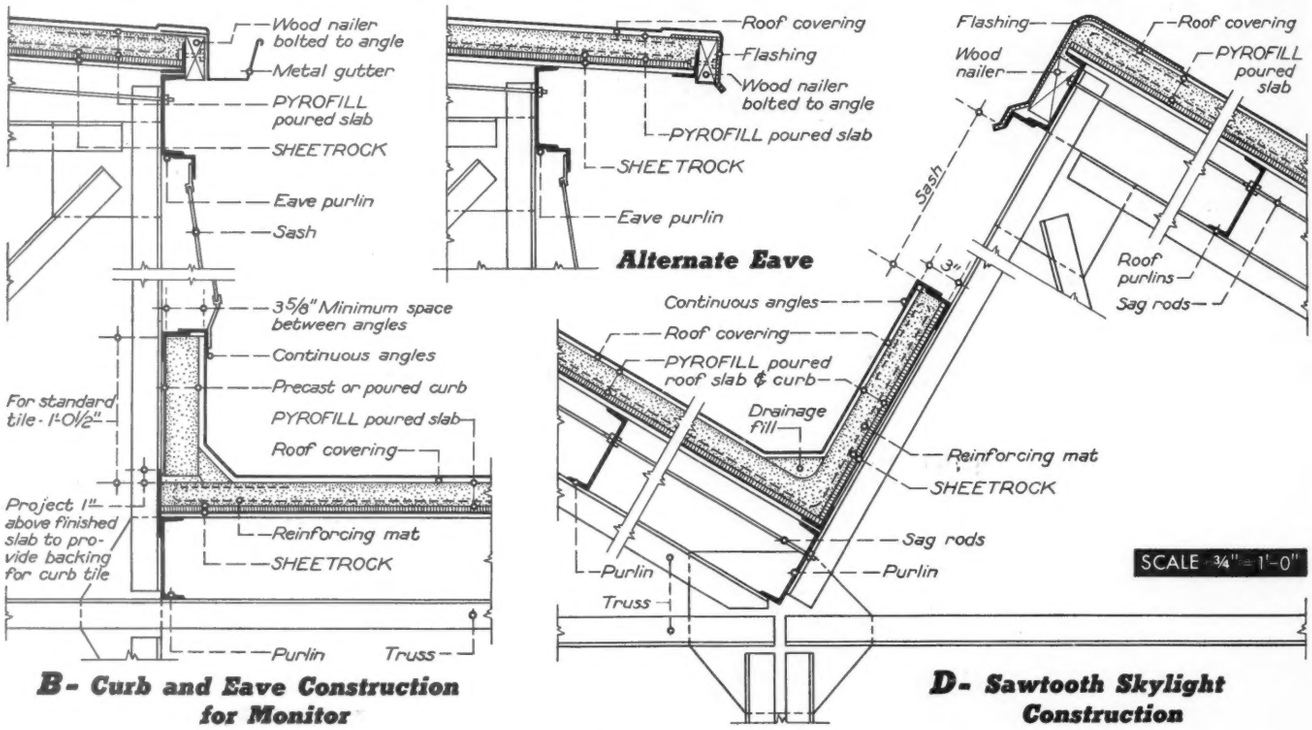




C
End Wall Detail


Cant
Roof covering
2" Min. PYROFILL poured slab
See TABLE for slab thickness
Sub-Purlins 2'-8½" o/c (USG Bulb Tee or Rail)
Electrically welded galvanized steel reinforcing fabric of No. 12 longitudinal wires 4" o/c and No. 14 transverse wires 8" o/c
No. 4 Standard clip
No. 4 Standard clip
½" SHEETROCK
Main purlin
SCALE 1½" = 1'-0"

A - Detail at Parapet Wall
Typical Sheetrock-Pyrofill Construction



B - Curb and Eave Construction for Monitor

Alternate Eave

D - Sawtooth Skylight Construction

Size of Sub-Purlins spaced 2'-8½" o/c	Allowable Span †		½" Sheetrock		
	18,000 f	20,000 f	Total Thick	*Lbs./ Sq. Ft.	Btu Loss
8# Bulb Tee	6'- 6"	6'-10"	2½"	11.5	.38
8.3# Bulb Tee	7'- 7"	8'- 0"	2½"	11.5	.38
12# Rail	8'-11"	9'- 3"	2½"	12.0	.38
16# Rail	11'- 2"	11'- 6"	2½"	12.5	.38
20# Rail	13'- 3"	13'- 8"	3"	15.0	?

*Including Sub-Purlins. † Total Dead & Live load 45 lbs. per sq. ft., M = 1/10 WL.

USG Deck Constructions

Millions of square feet of USG roof and floor deck constructions are in use. They are of 3 general types consisting of (1) precast gypsum planks or gypsum tiles, (2) steel decks, and (3) poured reinforced gypsum slabs.

Pyrofill

Pyrofill slabs are composed of reinforced gypsum poured-in-place over permanent forms of Sheetrock. There are no joints for heat loss and the monolithic construction helps stiffen the building structure. Upon the supporting steel purlins, sub-purlins are placed 2'-8½" o/c. Sheetrock in ½" thickness is placed as permanent form work between the purlins. After the reinforcing has been placed over the permanent forms Pyrofill is poured and screeded to the proper thickness, making the total depth of slab including the form 2½". Curbs, end walls, etc., are usually constructed of precast gypsum tile. They may also be made of Sheetrock-Pyrofill or Weatherwood-Pyrofill construction.

Over Light Steel Framing

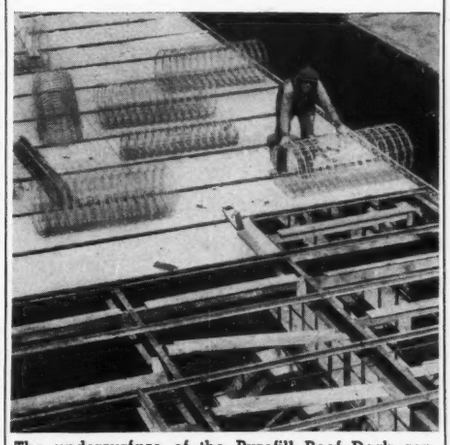
The Pyrofill construction may be also used advantageously for floors or roofs over light steel beams or bar joists. No sub-purlins are required if the steel spacing does not exceed 3'-0". The forms of Sheetrock are placed to span 2 or more supports. The reinforcing and construction of the slab are the same as for the construction with purlins. This construction will be found economical in light occupancy buildings and presents the same advantages as the standard construction.

Advantages

Whenever steel framing is used (whether the roof be flat, 45° pitched, monitor, sawtooth, Pond, Aiken, etc.) the inherent value of either Sheetrock-Pyrofill construction may be advantageously employed.

The inherent advantages of gypsum for fireproofing are universally recognized.

For standard slab thicknesses and sub-purlin sizes Sheetrock-Pyrofill construction weighs only 12½ pounds per square foot (see table at bottom of next page). This light weight, as compared with other masonry construction, permits savings throughout the structure, including columns and footings.



The undersurface of the Pyrofill Roof Deck consists of Sheetrock 2'-8" wide, in lengths equal to the purlin spacing so that end joints occur over the main purlins. With the form joints thus concealed, a smooth, attractive, light-reflecting undersurface results.

The simplicity of the construction, plus the light weight and the speed with which it is installed make Sheetrock-Pyrofill roof construction extremely economical.

Gypsum is among the highest in insulating value of the fireproof structural building materials. It is effective in protecting the building from extremes of outside temperature, both in summer and in winter.

For Greatest Economy

Usually a span of approximately 8 feet between main purlins with a 2½" slab thickness will be found most economical.

If channels are used as main purlins on sloping roofs, they should open upwards to permit proper clipping of the sub-purlins with No. 4 purlin clip.

By preserving uniformity of span, labor costs are reduced and standard lengths of Sheetrock or Weatherwood may be used.

While flat roofs require less labor than steep ones, the difference up to 30° pitch is not of sufficient importance to warrant serious consideration. On a roof, however, over 45° pitch, it may be necessary to back-form from the top in order to obtain a satisfactory job. This will obviously add to the cost of the roof.

Sheetrock-Pyrofill and Weatherwood-Pyrofill roof deck construction can be specified with assurance of an excellent job.

A. I. A. FILE NO. 4L

Pyrofill Specifications

A. I. A. FILE NO. 4L

NOTE—Notes in small type are explanatory and are not a part of the Specification. Additional copies of this Specification will be gladly supplied on request—to be used for interlining and crossing out in preparing copy for typing.

1. GENERAL CONDITIONS. The current edition of the A. I. A. General Conditions are part of this Specification.

2. WORK INCLUDED. This Section comprises all labor and materials for the installation of reinforced Pyrofill slabs using ½" Sheetrock over areas shown on the drawings.

> The Sheetrock-Pyrofill type of construction may be used for floors or roofs over light steel beams or bar joists without sub-purlins if the steel spacing does not exceed 3'-0". For supporting steel spaced over 3'-0" sub-purlins are used.

3. ALLOWANCE. Allow the sum of..... dollars to cover Pyrofill slab construction to be furnished and installed by an experienced Gypsum roof contractor.

> The Architect may wish to arrange for this work separately in order to maintain close control over it. The A. I. A. *Handbook of Architectural Practice* says that such allowances form an entirely legitimate and highly useful method of covering items of such a nature that good results are not to be had from competitive bidding. Nevertheless it is well to completely specify and bind this Section with the other Specifications so that the General Contractor and others can refer to them and to understand what work is to be done under the allowance provision.

4. COOPERATION WITH OTHER TRADES. Refer particularly to the sections on Structural Steel; Roofing, Sheet Metal and Skylights; and any others describing work which is to be carried on in conjunction with the erection of Pyrofill slabs. Cooperate fully with persons carrying on such other work so as to cause no delay, interference or harm to the Owner's best interests.

5. MATERIALS IN GENERAL. Use products manufactured by the United States Gypsum Company, Chicago.

6. SUB-PURLINS. For purlins use steel (. . . *tees or rails* . . .) of sizes and spacings required or indicated on the structural plans. Furnish purlins with a shop coat of paint. Provide suitable clips or spot welds to rigidly secure sub-purlins to other structural support.

7. SHEETROCK FORMS. Furnish ½" thick Sheetrock 2'-8" wide and mill-made to exact lengths not over 10'-0" to match the main purlin spacing.

8. PYROFILL. Furnish Pyrofill consisting of a mix-mixture of 12½ pounds of clean soft wood fiber to every 87½ pounds of calcined gypsum.

9. REINFORCEMENT. Furnish galvanized electrically-welded steel fabric made to USG specifications, consisting of No. 12 longitudinal wires 4″ o/c and No. 14 transverse wires 8″ o/c having an effective sectional area of .026 square miles per foot width of slab.

10. PRECAST CURB TILE. Where required by the drawings furnish 3″ thick precast gypsum curb tile. For end wall construction furnish Pyrobar Gypsum Curb Tile 3″ x 15″ x 30″ non-reinforced. Where curb tile carries a roof load or retains drainage fill, furnish reinforced Pyrobar Gypsum Curb Tile.

11. GYPSUM MORTAR. Use gypsum mortar consisting of 1 part of unfibered gypsum cement plaster and not to exceed 2 parts of clean sand.

12. ERECTION IN GENERAL. All Pyrofill construction including (. . . *Sheetrock, sub-purlins, curbs, and walls, saddles, drainage fill* . . .) is to be completely erected by an experienced Gypsum roof contractor. Arrange reinforcement to be continuous. Make the Pyrofill plastic with water, pour over forms and screed to a true and even surface ready to receive the (. . . *floor or roof* . . .) finish.

13. SLAB CONSTRUCTION WITH PURLINS. The total thickness of the slab including the forms is to be 2½″ thick. Stagger joints in sub-purlins or tie them rigidly together.

14. SLAB CONSTRUCTION WITHOUT PURLINS Lay form boards in lengths to span over 2 or more supports with the ends held in alignment by means of special clips. The total thickness of the slab including the forms is to be 2½″ thick.

15. CURBS. Construct curbs of (. . . *poured Sheetrock Pyrofill, or precast gypsum curb tile set in gypsum mortar* . . .).

16. END WALLS. Construct end walls of (. . . *monitors, sawtooth skylights, "A" frames* . . .) of Pyrobar Gypsum Curb Tile set in gypsum mortar.

17. DRAINAGE FILL. Provide Pyrobar saddles and drainage pitches to direct roof water to drainage outlets.

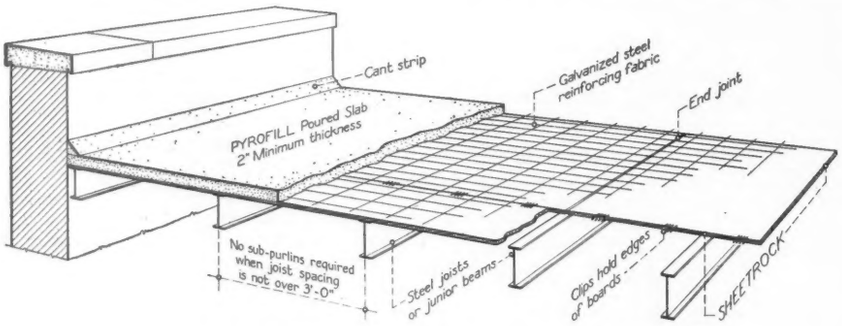


Diagram of Pyrofill construction without fill

Specification Notes

Specify under ROOFING. Apply roofing to Pyrofill decks as soon as possible after the slab is erected and in not less than 20 days.

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